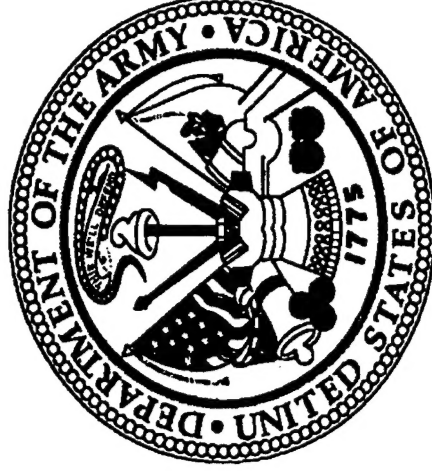


# DEPARTMENT OF THE ARMY

## Procurement Programs



**DTIC QUALITY INSPECTED 2**

Committee Staff Procurement Backup Book  
FY 1999 Amended Budget Estimates

### WEAPONS AND TRACKED COMBAT VEHICLES

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APPROPRIATION

February 1998

19980305 024

DISTRIBUTION STATEMENT A

Approved for public release;  
Distribution Unlimited

# Index for WEAPONS AND TRACKED COMBAT VEHICLES

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## Index for WEAPONS AND TRACKED COMBAT VEHICLES

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Appropriation: \*\*WEAPONS & TRACKED COMBAT VEHICLES\*\*

Activity: 1. \*\*TRACKED COMBAT VEHICLES\*\*

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97			FY 98		
				QTY (5)	COST (6)		QTY (7)	COST (8)	
(1)	(2)	(3)	(4)	(5)	(6)		(7)	(8)	(9)
	<b>**TRACKED COMBAT VEHICLES**</b>								
1	ABRAMS TRNG DEV MOD (GA5208)				3,170			2,176	8,536
2	BRADLEY BASE SUSTAINMENT (G80718)	B			250,920			231,043	285,844
3	BRADLEY FVS TRAINING DEVICES (G20900)	A			571				12,728
4	HAB TRAINING DEVICES (G84600)								386
5	BRADLEY FVS TRAINING DEVICES (MOD) (GZ2500)	A			848				2,075
6	FIELD ARTILLERY AMMUNITION SUPPORT VEH (G80100)	A		48	58,314		36	39,179	
7	ABRAMS TANK TRAINING DEVICES (GB1300)	A			12,546			13,076	13,411
8	COMMAND & CONTROL VEHICLE (G84200)	B	4,424,100	5	48,766		5	30,262	44,241
	<b>SUB-ACTIVITY TOTAL</b>				<b>375,135</b>			<b>315,736</b>	<b>367,221</b>
	<b>**MODIFICATION OF TRACKED COMBAT VEHICLES**</b>								
9	CARRIER, MOD (GB1930)	A			44,717			39,418	54,454
10	FIST VEHICLE (MOD) (GZ2300)	B						15,595	20,720
11	BFVS SERIES (MOD) (GZ2400)	A			113,618			59,974	58,998



Appropriation: \*\*WEAPONS & TRACKED COMBAT VEHICLES\*\*

Activity: 1. \*\*TRACKED COMBAT VEHICLES\*\*

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97			FY 98		
				QTY	COST		QTY	COST	
(1)	(2)	(3)	(4)	(5)	(6)		(7)	(8)	(9)
									(10)
12	HOWITZER, MED SP FT 155MM M109A6 (MOD) (GA0400)	A			95,410			72,784	11,339
13	HOWITZER, MED SP FT 155MM M109A5 (MOD) (GA0401)	A			130				
14	FAASV PIP TO FLEET (GA8010)	A			23,510			1,883	3,157
15	IMPROVED RECOVERY VEHICLE (M88 MOD) (GA0570)	A			55,529			31,922	38,175
16	HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)	B			51,401			41,311	50,401
17	ARMORED VEH LAUNCH BRIDGE (AVLB) (MOD) (GZ3000)	A							969
18	M1 ABRAMS TANK (MOD) (GA0700)	A			62,934			29,230	53,301
19	ABRAMS UPGRADE PROGRAM (GA0750) LESS: ADVANCE PROCURMENT (PY)	A			501,046			586,799	666,195
					-297,218			-258,171	-253,534
					203,828			328,628	412,661
20	ABRAMS UPGRADE PROGRAM (GA0750) ADVANCE PROCUREMENT (CY)				258,171			253,534	262,942
21	MODIFICATIONS LESS THAN \$2.0M (TCV-WTCV) (GA0925)							1,009	
	SUB-ACTIVITY TOTAL				909,248			875,288	967,117

Appropriation: \*\*WEAPONS & TRACKED COMBAT VEHICLES\*\*

Activity: 1. \*\*TRACKED COMBAT VEHICLES\*\*

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97			FY 98		
				QTY	COST	(5)	QTY	COST	(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	<b>**SUPPORT EQUIPMENT AND FACILITIES**</b>								
22	ITEMS LESS THAN \$2.0M (TCV-WTCV) (GL3100)				11		136		132
23	PRODUCTION BASE SUPPORT (TCV-WTCV) (GA0050)				9,286		8,758		8,861
24	REGIONAL MAINTENANCE TRAINING SITES-EQUIP (GA2449)				1,362				
	<b>SUB-ACTIVITY TOTAL</b>				<b>10,659</b>		<b>8,894</b>		<b>8,993</b>
	<b>ACTIVITY TOTAL</b>				<b>1,295,042</b>		<b>1,199,918</b>		<b>1,343,331</b>

Appropriation: \*\*WEAPONS & TRACKED COMBAT VEHICLES\*\*

Activity: 2. \*\*WEAPONS AND OTHER COMBAT VEHICLES\*\*

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97			FY 98		
				QTY	COST	QTY	COST	QTY	COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>**WEAPONS AND OTHER COMBAT VEHICLES**</b>									
25	ARMOR MACHINE GUN, 7.62MM M240 SERIES (G13000)	A	9,652	2,034	20,291	1,500	14,692	673	6,496
26	MACHINE GUN, 5.56MM (SAW) (G12900)	A	2,946	3,802	12,050	406	5,455	1,525	4,494
27	GRENADE LAUNCHER, AUTO, 40MM, MK19-3 (G13400)	A	17,490	2,150	32,972	400	7,835	697	12,191
28	M16 RIFLE (G14900)	A	425	15,583	6,523	11,297	4,984	16,067	6,829
29	5.56 CARBINE M4 (G14904)	A	670	10,603	6,523	7,484	4,984	6,310	4,230
	<b>SUB-ACTIVITY TOTAL</b>				<b>78,359</b>		<b>37,950</b>		<b>34,240</b>
<b>**MODIFICATION OF WEAPONS AND OTHER COMBAT VEHICLES**</b>									
30	M4 CARBINE MODS (GB3007)	A			4,494		4,886		5,149
31	M119 MODIFICATIONS (GC0401)	A					4,875		4,812
32	M16 RIFLE MODS (GZ2800)	A			4,907		4,669		6,241
33	MODIFICATIONS LESS THAN \$2.0M (WOCV-WTCV) (GC0925)				627		1,378		1,128
	<b>SUB-ACTIVITY TOTAL</b>				<b>10,028</b>		<b>15,808</b>		<b>17,330</b>

Appropriation: \*\*WEAPONS & TRACKED COMBAT VEHICLES\*\*

Activity: 2. \*\*WEAPONS AND OTHER COMBAT VEHICLES\*\*

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97			FY 98		
				QTY	COST	(5)	QTY	COST	(10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	<b>**SUPPORT EQUIPMENT AND FACILITIES**</b>								
34	ITEMS LESS THAN \$2.0M (WOCV-WTCV) (GL3200)				899		1,190		1,164
35	PRODUCTION BASE SUPPORT (WOCV-WTCV) (GC0050)				4,296		6,067		5,140
36	INDUSTRIAL PREPAREDNESS (GC0075)				5,068		5,640		3,959
37	SMALL ARMS (SOLDIER ENH PROG) (GC0076)				5,338		4,093		5,233
38	CLOSED ACCOUNT ADJUSTMENTS (GC9500)				142				
	<b>SUB-ACTIVITY TOTAL</b>				<b>15,743</b>		<b>16,990</b>		<b>15,496</b>
	<b>ACTIVITY TOTAL</b>				<b>104,130</b>		<b>70,748</b>		<b>67,066</b>

Appropriation: \*\*WEAPONS & TRACKED COMBAT VEHICLES\*\*

Activity: 3. \*\*SPARES AND REPAIR PARTS\*\*

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 99 UNIT COST	(Thousands of Dollars)					
				FY 97			FY 98		
				QTY	COST	(5)	QTY	COST	(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	<b>**SPARES AND REPAIR PARTS**</b>								
39	SPARES AND REPAIR PARTS (WTCV) (GEO150)				19,883		20,199		23,211
	<b>SUB-ACTIVITY TOTAL</b>				19,883		20,199		23,211
	<b>ACTIVITY TOTAL</b>				19,883		20,199		23,211
	<b>APPROPRIATION TOTAL</b>				1,419,055		1,290,865		1,433,608

Exhibit P-1M, Procurement Programs - Modification Summary

System/Modification	(TOA, Dollars in Millions)							To Complete	Total Program
	1996 &								
	Prior	1997	1998	1999	2000	2001	2002		
<b>ABRAMS TRNG DEV MOD (GA5208)</b>									
M60A3 to M1 Conversion Kits	5.4								5.4
OIP Modification to M1A1 COFTs	2.1								2.1
AEI	1.7								1.7
M1 to M1A1 Modification Kits	2.2	0.4							2.6
Conduct of Fire Trainer (COFT) Image Generator (IG) and Computer R		2.8	2.2	4.1	0.8	0.8	0.8	4.3	16.6
AGTS/SEP Mod						0.6	2.4	6.0	11.4
Tank Driver Trainer Mod (M1A2 SEP Upgrade)				4.2	1.4	0.9	2.5	2.7	6.1
Close Combat Tactical Trainer (CCTT)/SEP Mod				0.2	0.2	3.2			8.3
Maintenance Training System (MTS) SEP Mod					0.3				3.7
Total	11.4	3.2	2.2	8.5	2.7	5.5	5.7	13.0	57.9
<b>BRADLEY FVS TRAINING DEVICES (MOD) (GZ2500)</b>									
Software Upgrades		0.8		2.1	4.4	4.8			12.1
Total		0.8		2.1	4.4	4.8			12.1
<b>CARRIER, MOD (GB1930)</b>									
Crew Chemical Protection	0.5	1.0	1.0	0.9	0.7	0.7	1.0	21.2	28.0
Block 1	276.9	43.7	38.4	53.6	58.7	52.9	72.6	795.1	1477.0
Total	277.4	44.7	39.4	54.5	59.4	53.6	73.6	816.3	1505.0
<b>BFVS SERIES (MOD) (GZ2400)</b>									
A1-A2 Conversion	347.3	16.4	16.8	13.6					394.1
A2 ODS Mods	67.2	49.6	28.9	31.9	1.6				179.2
Transmission Electronic Controller (TEC)	5.8	4.1	3.6						13.5
ACU Pillow Block Mod	5.8	0.9	0.6						7.2
Vehicle Intercom System	8.4	3.0	3.9						15.3
DECA	11.5	5.7	1.4	2.5					21.1
HALON Replacement	3.7	0.6	4.7	0.1	0.1				9.2

Exhibit P-1M, Procurement Programs - Modification Summary

(TOA, Dollars in Millions)									
System/Modification	1996 & Prior	1997	1998	1999	2000	2001	2002	2003	To Complete Program
Armor Tiles									73.3
A2 Card Retrofit	40.6	32.7							0.8
Suite of Survivability Enhancement Systems		0.8							19.0
A2 ODS Applique				10.9		7.4	4.0	7.6	10.9
<b>Total</b>	<b>490.3</b>	<b>113.6</b>	<b>60.0</b>	<b>59.0</b>	<b>1.7</b>	<b>7.4</b>	<b>4.0</b>	<b>7.6</b>	<b>743.6</b>
<b>HOWITZER, MED SP FT 155MM M109A6 (MOD) (GA0400)</b>									
Howitzer Improvement Program	1207.4	95.4	66.5	11.3	9.1	5.5	0.1		1395.3
Chlorofluorocarbon (CFC) Elimination			6.3						15.8
<b>Total</b>	<b>1207.4</b>	<b>95.4</b>	<b>72.8</b>	<b>11.3</b>	<b>9.1</b>	<b>5.5</b>	<b>0.1</b>		<b>1411.1</b>
<b>FAASV PIP TO FLEET (GA8010)</b>									
FAASV Materiel Change (A2 Conversion)	72.5	22.5	0.1	2.9	0.1		18.7		116.8
FAASV Halon Replacement	0.4	1.0	1.8	0.3					8.1
<b>Total</b>	<b>72.9</b>	<b>23.5</b>	<b>1.9</b>	<b>3.2</b>	<b>0.1</b>		<b>18.7</b>		<b>124.9</b>
<b>ARMORED VEH LAUNCH BRIDGE (AVLB) (MOD) (GZ3000)</b>									
AVLB 70 Block MOD				1.0	1.3	1.7			4.0
<b>Total</b>				<b>1.0</b>	<b>1.3</b>	<b>1.7</b>			<b>4.0</b>
<b>M1 ABRAMS TANK (MOD) (GA0700)</b>									
Halon Replacement (HAR) [MOD 1]	7.4	1.5	2.0	5.3	6.5	6.6	6.8	5.7	47.4
Driver's Hatch Interlock (DHI) [MOD 2]		20.4	6.5	5.8	4.9				39.8
Vehicle Intercommunications System (VIS) [MOD 3]	27.0	6.6	6.0	5.3	0.7				45
Armament Enhancement Initiative (AEI) [MOD 4]	60.1	0.4							50.1
Precision Lightweight GPS Receiver (PLGR) [MOD 5]	0.4		0.5	0.6	0.6	0.6	0.6	0.6	60.5
Live Fire Category A (LFCA) [MOD 6]	14.5	5.3	3.5	3.5	3.5	3.3	2.9	2.5	17.3
Battlefield Override (BF/OR) [MOD 7]	13.7	2.7	2.1	4.2	1.1	0.8	0.6	0.3	39.3
Live Fire Category B (LFCB) [MOD 8]	2.4	1.8	0.8	0.8	0.8	0.7	0.7	0.6	25.5
									8.6

Exhibit P-1M, Procurement Programs - Modification Summary

(TOA, Dollars in Millions)

System/Modification	1996 & Prior	1997	1998	1999	2000	2001	2002	2003	To Complete	Total Program
Driver's Viewer Quick Release (DVQR) [MOD 9]	0.3	0.2	0.3	0.3	0.2					1.3
Pulse - Jet System (PJS) [MOD 10]	29.0	6.7	3.5	2.4	1.5				296.9	340.0
Mounted Water Ration Heater (MWRH) [MOD 11]	1.9	0.1	0.1							2.1
System Enhancement Package (SEP) [MOD 12]					2.9	46.5	82.8	107.4	655.5	895.1
Embedded Battle Command (EBC) [MOD 13]					1.0	1.0	1.1	1.0	5.5	9.6
External Auxiliary Pwr Unit (EAPU) [MOD 14]		8.0	2.0						40.8	50.8
External Auxiliary Pwr Unit Upgrade (EAPUU) [MOD 15]	2.4									2.4
NBC Fire Warning (NBCFW) [MOD 16]				4.1	3.3	0.4			5.3	13.1
Hand-Held Fire Extinguisher (HHFE) [MOD 17]					1.8					1.8
M1A2 Field Mods (A2FM) [MOD 18]		1.4	0.9	0.2	1.0	2.0	1.0	1.2	6.0	13.7
Matrix Support (MXSP) [MOD 19]		0.5	0.5	0.5	0.6	0.6	0.6	0.6	3.4	7.3
Prior Year Mod Installation (PYMI) [MOD 20]	65.0	4.9	0.5							70.4
M1A1-D Integration Kit [MOD 21]				20.3					271.4	291.7
<b>Total</b>	<b>221.7</b>	<b>62.9</b>	<b>29.2</b>	<b>53.3</b>	<b>30.4</b>	<b>62.5</b>	<b>97.1</b>	<b>119.9</b>	<b>1348.4</b>	<b>2025.4</b>
<b>M4 CARBINE MODS (GB3007)</b>										
Close Combat Optics (M4 Carbine)	0.9	3.1	1.1	2.6	5.4					13.1
M203 for M4 Carbine		0.4								0.4
Modular Weapon System (M4 Carbine)		1.0	3.1	1.1						5.2
M4 Improved Buttstock			0.7	1.4						2.1
<b>Total</b>	<b>0.9</b>	<b>4.5</b>	<b>4.9</b>	<b>5.1</b>	<b>5.4</b>					<b>20.8</b>
<b>M119 MODIFICATIONS (GC0401)</b>										
Block 1 Upgrade			4.9	4.8	2.9	0.3				12.8
Block 2 Upgrade						2.9			13.9	16.8
<b>Total</b>			<b>4.9</b>	<b>4.8</b>	<b>2.9</b>	<b>3.2</b>			<b>13.9</b>	<b>29.6</b>
<b>M16 RIFLE MODS (GZ2800)</b>										
Modular Weapon System (M16/M203)		2.9	1.5	4.5						8.9



Exhibit P-1M, Procurement Programs - Modification Summary

System/Modification	(TOA, Dollars in Millions)									
	1996 & Prior	1997	1998	1999	2000	2001	2002	2003	To Complete	Total Program
Close Combat Optics (M16)	2.8	2.0	3.1	1.7						9.6
Total	2.8	4.9	4.7	6.2						18.6
MODIFICATIONS LESS THAN \$2.0M (WOCV-WTCV) (GC0925)										
M198 Howitzer System Improvement	13.8	0.6								14.5
Machine Gun Optics			1.3	1.1	1.0	1.0	1.3	1.3		7.1
Total	13.8	0.6	1.3	1.1	1.0	1.0	1.3	1.3		21.5
Grand Total	2298.5	354.1	221.3	210.3	118.4	145.2	200.5	220.6	2205.7	5974.6

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles												ABRAMS TRNG DEV MOD (GA5208)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	14.2	1.0	3.0	3.2	2.2	8.5	2.7	5.5	5.7	5.7	13.0	64.6	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	14.2	1.0	3.0	3.2	2.2	8.5	2.7	5.5	5.7	5.7	13.0	64.6	
Initial Spares													
Total Proc Cost	14.2	1.0	3.0	3.2	2.2	8.5	2.7	5.5	5.7	5.7	13.0	64.6	
Flyaway U/C													
Wpn Sys Proc U/C													

**DESCRIPTION:** Funding provided will accomplish modifications to Abrams Training Devices required as a result of changes to the Abrams tanks or tank training requirements. These changes are hardware and software modifications to existing equipment to keep simulators abreast of developments in the Abrams Tank System.

**JUSTIFICATION:** The program reflected here-in is structured to meet needs validated by the Abrams user community. Degradation of tank training will occur if these modifications are delayed or deleted. The intended sites for the Conduct of Fire Trainer (COFT) M60A3 to M1 Conversions are for the National Guard units. The average expected gunner and commander throughput per year for the modified COFT is 3,016. The Conduct of Fire Trainer (COFT) M1 to M1A1, Optical Improvement (OIP) and Armament Enhancement Initiative (AEI) modifications are for units at FORSCOM, USAREUR, TRADOC, and National Guard.

Exhibit P-40M Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No.				Date				February 1998			
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles				P-1 Item Nomenclature				ABRAMS TRNG DEV MOD (GA5208)			
Program Elements for Code B Items				Code				Other Related Program Elements			
Description		Fiscal Years									
OSIP NO.	Classification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	Total
M60A3 to M1 Conversion Kits											
1-03-05-4430	Operational	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4
OIP Modification to M1A1 COFTs											
1-90-05-7877	Operational	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
AEI											
1-93-05-4452	Operational	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
M1 to M1A1 Modification Kits											
1-92-06-4419	Operational	2.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Conduct of Fire Trainer (COFT) Image Generator (IG) and Computer Rehost											
1-97-05-4526	Operational	0.0	2.8	2.2	4.1	0.8	0.8	0.8	0.8	4.3	16.6
AGTS/SEP Mod											
1-97-05-4527	Operational	0.0	0.0	0.0	0.0	0.0	0.6	2.4	2.4	6.0	11.4
Tank Driver Trainer Mod (M1A2 SEP Upgrade)											
1-97-05-4528	Operational	0.0	0.0	0.0	4.2	1.4	0.0	0.0	0.5	0.0	6.1
Close Combat Tactical Trainer (CCTT)/SEP Mod											
1-97-05-4529	Operational	0.0	0.0	0.0	0.0	0.2	0.9	2.5	2.0	2.7	8.3
Maintenance Training System (MTS) SEP Mod											
1-97-05-4530	Operational	0.0	0.0	0.0	0.2	0.3	3.2	0.0	0.0	0.0	3.7
Totals											
		11.4	3.2	2.2	8.5	2.7	5.5	5.7	5.7	13.0	57.9
FY96 & prior does not include 6.8 of FY93 program dollars for mod that has been completed.											

INDIVIDUAL MODIFICATION													
										Date	February 1998		
<b>MODIFICATION TITLE:</b> M60A3 to M1 Conversion Kits 1-03-05-4430													
<b>MODELS OF SYSTEMS AFFECTED:</b> M60A3 COFTs													
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The Conduct of Fire Trainer (COFT) provides the ready capability for precision tank gunnery training while reducing the O&amp;S costs associated with ammunition consumption. The COFT is configured to the tank system it supports.</p> <p>In support of the Abrams fielding schedule, the conversion of M60A3 COFTs to M1 COFTs is required to meet the Army's new force structure. The structure has changed to make the M60 tank and training devices obsolete. This situation establishes an urgent requirement to convert the M60A3 COFTs to M1 configuration.</p> <p>Without this modification, one of the following most likely will occur: 1) Negative training results from using outdated COFTs; 2) In lieu of using the outdated COFTs, units do little or no gunnery training; or 3) Units increase training with the tank and consumption of full caliber ammunition (which is more costly and ultimately defeats the primary purpose of the COFT).</p>													
<div style="display: flex; justify-content: space-around;"> <div> <b>PLANNED</b>            4Q95            4Q95         </div> <div> <b>ACCOMPLISHED</b>            1Q96            1Q96         </div> </div>													
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>													
<b>Contractor Test and Evaluation:</b> Initial Operational Test and Evaluation:													
<b>Installation Schedule:</b>													
<b>Inputs</b>  <b>Outputs</b>	Pr Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4
	16	4	2	1	4								
<b>Inputs</b>  <b>Outputs</b>	Totals	13											
	FY 2002	FY 2003		FY 2004		FY 2005		To Complete		Totals			
	1	2	3	4	1	2	3	4	1	2	3	4	
20	20												
<b>METHOD OF IMPLEMENTATION:</b> Contractor													
<b>Contract Dates:</b> FY 1997													
<b>Delivery Date:</b> FY 1997													
<b>ADMINISTRATIVE LEADTIME:</b> 1 Months													
<b>PRODUCTION LEADTIME:</b> 12 Months													

INDIVIDUAL MODIFICATION														Date		February 1998				
MODIFICATION TITLE (Cont):														M60A3 to M1 Conversion Kits 1-03-05-4430						
FINANCIAL PLAN: (\$ in Millions)																				
RDT&E	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PROCUREMENT																				
Kit Quantity	20																		20	
Installation Kits		3.8																		3.8
Installation Kits, Nonrecurring Equipment		1.6																		1.6
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installation		5.4																		5.4
Total Procurement Cost																				

INDIVIDUAL MODIFICATION																																																																																																																																											
MODIFICATION TITLE: OIP Modification to M1A1 COFTs 1-90-05-7877										Date																																																																																																																																	
February 1998																																																																																																																																											
MODELS OF SYSTEMS AFFECTED: M1A1 COFTs																																																																																																																																											
<b>DESCRIPTION / JUSTIFICATION:</b> <p>This modification is required because the tank's optics now include filters to protect the crew from eye damage resulting from exposure to lasers. To accommodate the improved optics, a new switch, which induces the eye safe laser filters, has been added and the switch used to change the gunner's sight from high to low power has been redesigned and relocated. Training with the Conduct of Fire Trainers (COFTs) will enable the gunners and commanders to quickly find and use the correct switches by touch.</p>																																																																																																																																											
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <u>PLANNED</u>            1Q96            2Q96         </div> <div style="text-align: center;"> <u>ACCOMPLISHED</u>            1Q96            3Q96         </div> </div>																																																																																																																																											
<b>Contractor Test and Evaluation:</b> <b>Initial Operational Test and Evaluation:</b>																																																																																																																																											
<b>Installation Schedule:</b> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td><b>Inputs</b></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td><b>Outputs</b></td> <td>20</td><td></td><td></td><td></td> <td>20</td><td>20</td><td>20</td><td>20</td> <td>20</td><td>10</td><td>10</td><td>20</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td><b>Inputs</b></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td><b>Outputs</b></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> </tbody> </table>															Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	<b>Inputs</b>																					<b>Outputs</b>	20				20	20	20	20	20	10	10	20									<b>Inputs</b>																					<b>Outputs</b>																				
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																																										
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																							
<b>Inputs</b>																																																																																																																																											
<b>Outputs</b>	20				20	20	20	20	20	10	10	20																																																																																																																															
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<b>Outputs</b>																																																																																																																																											
<b>Method of Implementation:</b> Contractor <b>Contract Dates:</b> FY 1997 <b>Delivery Date:</b> FY 1997																																																																																																																																											
<b>Administrative Leadtime:</b> 9 Months <b>Production Leadtime:</b> 18 Months <b>FY 1998</b> <b>FY 1999</b>																																																																																																																																											

INDIVIDUAL MODIFICATION																				
OIP Modification to M1A1 COFTs 1-90-05-7877																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	100	1.5																	100	1.5
Installation Kits		0.6																		0.6
Installation Kits, Nonrecurring Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment		2.1																		2.1
Total Procurement Cost																				

<b>INDIVIDUAL MODIFICATION</b>										Date	February 1998
<b>MODIFICATION TITLE:</b> AEI 1-93-05-4452											
<b>MODELS OF SYSTEMS AFFECTED:</b> M1A1 COFTs											
<b>DESCRIPTION / JUSTIFICATION:</b> The Armament Enhancement Initiative (AEI), 120mm tank round modification is required to change the configuration of the M1A1 COFT to the latest configuration of the tank. Addition of new rounds causes switch changes and additional sight reticles in the tank. These changes affect training and can only be provided in the COFT. The COFT will require both hardware and software changes to provide this capability. A key benefit of training with the COFT is in training gunners and commanders on the capability of new rounds with special features without having to fire the actual rounds. Using the existing COFTs without this capability results in severe negative training. The COFT must maintain the same configuration as the tank system it supports.											
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>											
						<u>PLANNED</u>			<u>ACCOMPLISHED</u>		
						1Q96 2Q96			1Q96 3Q96		
<b>Contractor Test and Evaluation:</b> <b>Initial Operational Test and Evaluation:</b>											
<b>Installation Schedule:</b>											
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Totals		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4	
Inputs		20		20 20 20 20		20		20		20	
Outputs		20		10 10 10 20		20		20		20	
Inputs		FY 2002		FY 2003		FY 2004		FY 2005		Totals	
Outputs		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4		Complete	
Inputs		100		100		100		100		100	
Outputs		100		100		100		100		100	
<b>METHOD OF IMPLEMENTATION:</b> Contractor				<b>ADMINISTRATIVE LEADTIME:</b> 9 Months				<b>PRODUCTION LEADTIME:</b> 18 Months			
<b>Contract Dates:</b> FY 1997				<b>FY 1998</b>				<b>FY 1999</b>			
<b>Delivery Date:</b> FY 1997				<b>FY 1998</b>				<b>FY 1999</b>			



INDIVIDUAL MODIFICATION													
MODIFICATION TITLE (Cont): AEI 1-93-05-4452													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E													
PROCUREMENT													
Kit Quantity													
Installation Kits	100	1.2											100
Installation Kits, Nonrecurring Equipment		0.5											1.2
Equipment, Nonrecurring													0.5
Engineering Change Orders													
Data													
Training Equipment													
Support Equipment													
Other													
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits													
FY 1997 Eqpt -- Kits													
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installation		1.7											1.7
Total Procurement Cost													

INDIVIDUAL MODIFICATION																																																																														
										Date	February 1998																																																																			
<b>MODIFICATION TITLE:</b> M1 to M1A1 Modification Kits 1-92-06-4419																																																																														
<b>MODELS OF SYSTEMS AFFECTED:</b> M1 COFTs																																																																														
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The Conduct of Fire Trainer (COFT) provides the ready capability for precision tank gunnery training while reducing the O&amp;S costs associated with ammunition consumption. The COFT is configured to the tank system it supports.</p> <p>In support of the Abrams fielding schedule, the M1 to M1A1 COFT modification is required to meet the Army's new force structure. All active army divisions, as well as selected National Guard units receiving the M1A1 tank have or will receive the modification. Additionally, the Armor School requires all M1A1 ICOFTs (four COFT crew stations), except for one standard M1 ICOFT and one linked M1 ICOFT used to provide Reserve Component training, be modified (hardware and software) to support basic and advance training of gunners and commanders. This situation establishes a requirement to upgrade the Armor School's M1 ICOFTs to the M1A1 capability</p>																																																																														
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <span><u>PLANNED</u></span> <span><u>ACCOMPLISHED</u></span> </div>																																																																														
<b>Contractor Test and Evaluation:</b> N/A <b>Initial Operational Test and Evaluation:</b> N/A																																																																														
<b>Installation Schedule:</b> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>Pr Yr</th> <th colspan="3">FY 1997</th> <th colspan="3">FY 1998</th> <th colspan="3">FY 1999</th> <th colspan="3">FY 2000</th> <th colspan="3">FY 2001</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td> <td>4</td><td>1</td><td>2</td> <td>3</td><td>4</td><td>1</td><td>2</td><td>3</td> <td>4</td><td>1</td><td>2</td> <td>3</td><td>4</td> </tr> <tr> <td>Inputs</td> <td>19</td><td></td><td></td> <td></td><td></td><td></td> <td>4</td><td>4</td><td>4</td><td>2</td><td>5</td> <td>3</td><td>8</td><td>2</td><td>2</td><td></td> </tr> <tr> <td>Outputs</td> <td>16</td><td></td><td></td> <td></td><td>1</td><td>1</td> <td>5</td><td></td><td>4</td><td>2</td><td>4</td> <td>2</td><td>6</td><td>4</td><td>8</td><td>2</td> </tr> </tbody> </table>												Pr Yr	FY 1997			FY 1998			FY 1999			FY 2000			FY 2001			Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs	19						4	4	4	2	5	3	8	2	2		Outputs	16				1	1	5		4	2	4	2	6	4	8	2
Pr Yr	FY 1997			FY 1998			FY 1999			FY 2000			FY 2001																																																																	
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																														
Inputs	19						4	4	4	2	5	3	8	2	2																																																															
Outputs	16				1	1	5		4	2	4	2	6	4	8	2																																																														
<table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th colspan="3">FY 2002</th> <th colspan="3">FY 2003</th> <th colspan="3">FY 2004</th> <th colspan="3">FY 2005</th> <th>To</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td> <td>4</td><td>1</td><td>2</td> <td>3</td><td>4</td><td>1</td><td>2</td><td>3</td> <td>4</td><td>Complete</td> </tr> <tr> <td>Inputs</td> <td></td><td></td><td></td> <td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td> <td></td><td>53</td> </tr> <tr> <td>Outputs</td> <td></td><td></td><td></td> <td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td> <td></td><td>53</td> </tr> </tbody> </table>													FY 2002			FY 2003			FY 2004			FY 2005			To	Totals	1	2	3	4	1	2	3	4	1	2	3	4	Complete	Inputs													53	Outputs													53											
	FY 2002			FY 2003			FY 2004			FY 2005			To																																																																	
Totals	1	2	3	4	1	2	3	4	1	2	3	4	Complete																																																																	
Inputs													53																																																																	
Outputs													53																																																																	
<b>METHOD OF IMPLEMENTATION:</b> Contractor																																																																														
<b>Contract Dates:</b> FY 1997 Oct 97      FY 1998      FY 1999 <b>PRODUCTION LEADTIME:</b> 24 Months																																																																														
<b>Delivery Date:</b> FY 1997 Oct 99      FY 1998      FY 1999																																																																														

INDIVIDUAL MODIFICATION													
MODIFICATION TITLE (Cont): M1 to M1A1 Modification Kits 1-92-06-4419													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RD&E													
PROCUREMENT													
Kit Quantity	48	1.2	5	0.4									53
Installation Kits													1.6
Installation Kits, Nonrecurring		1.0											1.0
Equipment													
Equipment, Nonrecurring													
Engineering Change Orders													
Data													
Training Equipment													
Support Equipment													
Other													
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits													
FY 1997 Eqpt -- Kits													
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installment													
Total Procurement Cost		2.2		0.4									2.6

INDIVIDUAL MODIFICATION																																																																																																																																												
										Date	February 1998																																																																																																																																	
<b>MODIFICATION TITLE:</b> Conduct of Fire Trainer (COFT) Image Generator (IG) and Computer Rehost 1-97-05-4526																																																																																																																																												
<b>MODELS OF SYSTEMS AFFECTED:</b> M1 and M1A1 COFTs																																																																																																																																												
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The Image Generator (IG) and computer subsystems that are presently being used in the COFTs are approaching obsolescence. It is becoming more difficult to obtain parts for these IGs since they are of the early 1980's design. Sustainability is becoming a major issue as repair and replacement parts are becoming more expensive or entirely not available on the commercial market. Likewise, the software designed to run on these components is also difficult to sustain. The goal is to obtain a replacement IG and computer that will provide for cheaper and easier software changes and more cost effective parts and maintenance. This will position the COFT fleet to support tank units and institutions beyond the year 2000.</p>																																																																																																																																												
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <u>PLANNED</u>            4Q99            1Q00         </div> <div style="text-align: center;"> <u>ACCOMPLISHED</u> </div> </div>																																																																																																																																												
<b>Contractor Test and Evaluation:</b> <b>Initial Operational Test and Evaluation:</b>																																																																																																																																												
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<b>METHOD OF IMPLEMENTATION:</b> Contractor <b>Contract Dates:</b> FY 1997 Mar 98 <b>Delivery Date:</b> FY 1997 Mar 98																																																																																																																																												
<b>ADMINISTRATIVE LEADTIME:</b> 9 Months <b>PRODUCTION LEADTIME:</b> 18 Months FY 1998 Mar 98 FY 1999 Sep 99 FY 1999 Mar 99 FY 1999 Sep 00																																																																																																																																												



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<b>MODIFICATION TITLE:</b> AGTS/SEP Mod 1-97-05-4527																																																																																																																			
<b>MODELS OF SYSTEMS AFFECTED:</b> M1A2 Advanced Gunnery Training System																																																																																																																			
<b>DESCRIPTION / JUSTIFICATION:</b> This funding will modify existing M1A2 Advanced Gunnery Training Simulators to represent the most recent SEP changes to the M1A2. It is cheaper to modify existing training devices than to procure new ones.																																																																																																																			
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>																																																																																																																			
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<b>METHOD OF IMPLEMENTATION:</b> Contractor																																																																																																																			
Contract Dates:				FY 1997				FY 1998				FY 1999				FY 1999																																																																																																			
Delivery Date:				FY 1997				FY 1998				FY 1999				FY 1999																																																																																																			
				ADMINISTRATIVE LEADTIME:				6 Months				PRODUCTION LEADTIME:				18 Months																																																																																																			



<b>INDIVIDUAL MODIFICATION</b>											
										Date	February 1998
<b>MODIFICATION TITLE:</b> Tank Driver Trainer Mod (M1A2 SEP Upgrade) 1-97-05-4528											
<b>MODELS OF SYSTEMS AFFECTED:</b> M1A1 Tank Driver Trainer											
<b>DESCRIPTION / JUSTIFICATION:</b> The Tank Driver Trainer (TDT) simulates actual tank performance for beginner and transitioning drivers. It provides a range of motion and simulated environments, terrain and situations which are difficult or impossible for the driver to experience in normal training or operations. The M1A2 driver's compartment and tasks are significantly different from the M1A1. This project upgrades existing M1A1 Tank Driver Trainers at the Armor School to match projected throughput of students as more M1A2s enter the field.											
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>											
				<u>PLANNED</u>				<u>ACCOMPLISHED</u>			
Contractor Test and Evaluation: Initial Operational Test and Evaluation:				3Q00							
				4Q00							
<b>Installation Schedule:</b>											
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Totals		1	2	3	4	1	2	3	4	1	2
Inputs											
Outputs						1					
Totals								1			
Inputs											
Outputs		1									
Totals		1									
<b>METHOD OF IMPLEMENTATION:</b> Contractor											
Contract Dates:				FY 1997				FY 1998			
Delivery Date:				FY 1997				FY 1998			
ADMINISTRATIVE LEADTIME:				6 Months				PRODUCTION LEADTIME:			
FY 1997				FY 1998				FY 1999			
FY 1997				FY 1998				FY 1999			
To				Complete				24 Months			





INDIVIDUAL MODIFICATION														
														February 1998
														Date
<b>MODIFICATION TITLE:</b> Close Combat Tactical Trainer (CCTT)/SEP Mod 1-97-05-4529														
<b>MODELS OF SYSTEMS AFFECTED:</b> Close Combat Tactical Trainer (CCTT)														
<b>DESCRIPTION / JUSTIFICATION:</b> <p style="text-align: center;">This funding will modify existing Close Combat Tactical Trainer modules to represent the most recent SEP changes to the M1A2.</p>														
<div style="display: flex; justify-content: space-between;"> <div> <b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> </div> <div> <b>PLANNED</b> </div> <div> <b>ACCOMPLISHED</b> </div> </div>														
<div style="display: flex; justify-content: space-between;"> <div> <b>Contractor Test and Evaluation:</b>            Initial Operational Test and Evaluation:         </div> <div>           3Q02            4Q02         </div> </div>														
<b>Installation Schedule:</b>														
<b>Inputs</b>  <b>Outputs</b>	Pr Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001				
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	
<b>Inputs</b>  <b>Outputs</b>	Totals	14	2	3	4	1	2	3	4	1	2	3	4	
	Totals	14	2	3	4	1	2	3	4	1	2	3	4	
<b>METHOD OF IMPLEMENTATION:</b> Contractor														
<b>Contract Dates:</b> FY 1997														
<b>Delivery Date:</b> FY 1997														
<b>ADMINISTRATIVE LEADTIME:</b> 6 Months														
<b>PRODUCTION LEADTIME:</b> 15 Months														
<b>FY 1998</b>														
<b>FY 1999</b>														



<b>INDIVIDUAL MODIFICATION</b>												Date	February 1998																																																																																																								
<b>MODIFICATION TITLE:</b> Maintenance Training System (MTS) SEP Mod 1-97-05-4530																																																																																																																					
<b>MODELS OF SYSTEMS AFFECTED:</b> M1A2 Maintenance Trainers																																																																																																																					
<b>DESCRIPTION / JUSTIFICATION:</b> This funding will modify existing M1A2 Maintenance Training Systems to represent the most recent SEP changes to the M1A2.																																																																																																																					
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <b>PLANNED</b>            3Q01            4Q01         </div> <div style="text-align: center;"> <b>ACCOMPLISHED</b> </div> </div>																																																																																																																					
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<b>ADMINISTRATIVE LEADTIME:</b> 6 Months <b>PRODUCTION LEADTIME:</b> 15 Months FY 1999 FY 1999																																																																																																																					



Exhibit P-40, Budget Item Justification Sheet													Date: February 1998
Appropriation / Budget Activity/Serial No:			P-1 Item Nomenclature:										
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			BRADLEY BASE SUSTAINMENT (G80718)										
Program Elements for Code B Items:			Other Related Program Elements:										
			Code:										
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty	317	97	105	80	98	73	103	163	181	142	887	2246	
Gross Cost	320.1	137.1	134.6	250.9	231.0	285.8	295.3	430.0	457.8	391.8	2328.3	5262.6	
Less PY Adv Proc								37.5	42.0	33.0	151.3	263.8	
Plus CY Adv Proc							60.6	38.3	13.6		151.3	263.8	
Net Proc (P-1)	320.1	137.1	134.6	250.9	231.1	285.9	355.9	430.8	429.4	358.8	2328.3	5262.8	
Initial Spares			4.9	2.3	0.3	7.1	9.3	11.8	11.0	11.2	83.9	141.8	
Total Proc Cost	320.1	137.1	139.5	253.2	231.4	293.0	365.2	442.6	440.4	370.0	2412.2	5404.6	
Fltway U/C													
Wpn Sys Proc U/C	1.0	1.4	1.3	3.2	2.4	4.0	3.0	2.7	2.6	2.8	2.7	2.4	

DESCRIPTION: The Bradley Base Sustainment Program initiated a program to upgrade first generation Bradleys(A0) into the A2 configuration and bridge the production gap until the introduction of the A3 upgrade vehicles. FY99 marks the third production year of the A3 configuration. The upgraded A3 Bradley Fighting Vehicle will facilitate enhanced command and control, provide greater lethality, survivability, mobility, and sustainability required to defeat current and future threat forces while remaining operationally compatible with the main battle tank.

JUSTIFICATION: The FY99 Budget will provide the third year of LRIP for the A3 upgrade program. The M2A3 upgrade program will provide digital communications and target acquisition upgrades required to fight as a member of the combined arms team. These vehicles will be remanufactured in the prime contractor's plant to preserve the critical skills and vendor base to allow for future modernization.

Quantities are all A0-A2's in FY96 and prior, 45 A0-A2 Linebackers and 35 A3's in FY97, 80 A0-A2ODS and 18 A3's in FY98, and all A3's thereafter.

A four year multi-year contract is planned for FY's 00-03.

Exhibit P-40C Budget Item Justification Sheet					Date
Appropriation / Budget Activity/Serial No.		P-1 Item Nomenclature		February 1998	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles		BRADLEY BASE SUSTAINMENT (G80718)			
Program Elements for Code B Items		Code	Other Related Program Elements		
<b>A3 Advanced Procurement Detail (in Mils):</b>					
	Fiscal Year	2000	2001	2002	2003
<b>FY TOA</b>					
FY2000 for FY2001 (memo)		37.5			
FY2000 for FY2002 (memo)		20.3			
FY2000 for FY2003 (memo)		2.8			
FY2001 (memo)			(37.5)		
FY2001 for FY2002 (memo)			21.7		
FY2001 for FY2003 (memo)			16.6		
FY2002 (memo)				(42.0)	
FY2002 for FY2003 (memo)				13.6	
FY2003 (memo)					(33.0)

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles				P-1 Line Item Nomenclature: BRADLEY BASE SUSTAINMENT (G80718)				Weapon System Type:		Date: February 1998	
WTCV Cost Elements			FY 96		FY 97		FY 98		FY 99					
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
		BRADLEY BASE SUSTAINMENT (M2A2/)	134613			75042			115165			13280		
		BRADLEY BASE SUSTAINMENT (M2A3)				175878			115878			272564		
TOTAL			134613			250920			231043			285844		



Exhibit P-40, Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No:										Date:		
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles										February 1998		
P-1 Item Nomenclature:										BRADLEY BASE SUSTAINMENT (M2A2) (G80716)		
Program Elements for Code B Items:												
		Other Related Program Elements:										
		Code:										
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty	317	97	105	45	80							644
Gross Cost	320.1	137.1	134.6	75.0	115.2	13.3	3.3	6.3	0.0	0.0	0.0	804.8
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	320.1	137.1	134.6	75.0	115.2	13.3	3.3	6.3	0.0	0.0	0.0	804.8
Initial Spares			4.9	2.3								7.2
Total Proc Cost	320.1	137.1	139.5	77.3	115.2	13.3	3.3	6.3	0.0	0.0	0.0	812.0
Flyaway U/C												
Wpn Sys Proc U/C	1.0	1.4	1.3	1.7	1.4							1.3

**DESCRIPTION:** The Bradley Base Sustainment Program initiated a program to upgrade first generation Bradleys(A0) into the A2 configuration and bridge the production gap until the introduction of the A3 upgrade vehicles. FY99 marks the third production year of the A3 configuration. The upgraded A3 Bradley Fighting Vehicle will facilitate enhanced command and control, provide greater lethality, survivability, mobility, and sustainability required to defeat current and future threat forces while remaining operationally compatible with the main battle tank.

Quantities are all A0-A2's in FY96 and prior, 45 A0-A2 Linebackers FY97, and 80 A0-A2ODS in FY 98.

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS/1/1/Tracked Combat Vehicles			P-1 Line Item Nomenclature: BRADLEY BASE SUSTAINMENT (M2A2) (G80716)			Weapon System Type:			Date: February 1998		
WTCV			FY 96			FY 97			FY 98			FY 99		
Cost Elements			ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
						\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
1. VEHICLE						60371	105	575	30600	45	680	49867	80	623
2. T2SS						8886	75	118				20000	80	250
3. Engine						4965	105	47				4000	80	50
4. Track						1933	105	18	829	45	18	1497	80	19
5. Other GFE (Buy)						6781	105	65	4832	45	107	8827	80	110
6. Other GFE (Reman)						11109	105	106	5043	45	112	9107	80	114
7. STINGER Kits									20464	99	207			
<b>SUBTOTAL</b>						<b>94045</b>			<b>61768</b>			<b>93298</b>		
8. Govt Test & Eval						340								
9. Engineering-Contractor						17845			5732			4100		1787
10. Engineering-Government						4270								4553
11. Project Management Admin						2644								
12. Fielding						7842			7542			3036		6940
13. Reimbursable Matrix Supt						2155								
<b>SUBTOTAL</b>						<b>35096</b>			<b>13274</b>			<b>7136</b>		<b>13280</b>
14. PSE						5472						14731		
<b>TOTAL</b>						<b>134613</b>			<b>75042</b>			<b>115165</b>		<b>13280</b>
Gross P-1 End Cost						134613			75042			115165		13280
Less: Prior Year Adv Proc (by PY FY)														
<b>Net P-1 Full Funding Cost</b>						<b>134613</b>			<b>75042</b>			<b>115165</b>		<b>13280</b>
Plus: P-1 CY Adv Proc														
Other Non P-1 Costs														
Initial Spares						4854			2271					
Mods														
<b>TOTAL</b>						<b>139467</b>			<b>77313</b>			<b>115165</b>		<b>13280</b>

Exhibit P-5a, Budget Procurement History and Planning												
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles					Weapon System Type:			P-1 Line Item Nomenclature: BRADLEY BASE SUSTAINMENT (M2A2) (G80716)				
WBS Cost Elements:		Contractor and Location		Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
Fiscal Years												
1. VEHICLE												
FY 96		UDLP, York PA		SS/FFP	TACOM	Jan-96	May-97	105	575	YES	NO	
FY 97		UDLP, York PA		SS/FFP	TACOM	Jul-97	Nov-97	45	680	YES	NO	
FY 98		UDLP, York PA		SS/FFP	TACOM	Aug-98	Nov-99	80	623	YES	NO	
2. T2SS												
FY 96		HAC, LaGrange GA		SS/FFP	AMCOM	Feb-96	Mar-97	75	118	YES	NO	
FY 98		HAC, LaGrange GA		SS/FFP	AMCOM	Nov-98	Aug-99	80	250	YES	NO	
3. Engine												
FY 96		Cummins, Columbus IN		SS/FFP	TACOM	Jan-96	Mar-96	105	47	YES	NO	
FY 98		Cummins, Columbus IN		SS/FFP	TACOM	Aug-98	Nov-98	80	50	YES	NO	
4. Track												
FY 96		Goodyear, Akron OH		SS/FFP	TACOM	Feb-96	Feb-97	105	18	YES	NO	
FY 97		Goodyear, Akron OH		SS/FFP	TACOM	Sep-97	Oct-97	45	18	YES	NO	
FY 98		Goodyear, Akron OH		SS/FFP	TACOM	Sep-98	Sep-99	80	19	YES	NO	
7. STINGER Kits												
FY 97		Boeing Corp		SS/FFP	AMCOM	Mar-97	Nov-97	99	207	YES	NO	
REMARKS:												





P-1 Item Nomenclature: BRADLEY BASE SUSTAINMENT (M2A2) (G80718)

Date: February 1998

# FY 98 / 99 BUDGET PRODUCTION SCHEDULE

COST ELEMENTS	M F R	FY	S E R V	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00												Fiscal Year 01												L A T E R																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Exhibit P-40, Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No:		Date: February 1998									
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles		P-1 Item Nomenclature: BRADLEY BASE SUSTAINMENT (M2A3) (G80717)									
Program Elements for Code B Items:		Other Related Program Elements:									
Code: B											
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty			35	18	73	103	163	181	142	887	1602
Gross Cost	0.0	0.0	175.9	115.9	272.6	292.0	423.7	457.8	391.8	2328.3	4458.0
Less PY Adv Proc							37.5	42.0	33.0	151.3	263.8
Plus CY Adv Proc						60.6	38.3	13.6		151.3	263.8
Net Proc (P-1)	0.0	0.0	175.9	115.9	272.6	352.6	424.5	429.4	358.8	2328.3	4458.0
Initial Spares				0.3	7.1	9.3	11.8	11.0	11.2	83.9	134.6
Total Proc Cost	0.0	0.0	175.9	116.2	279.7	361.9	436.3	440.4	370.0	2412.2	4592.6
Flyaway U/C											
Wpn Sys Proc U/C			5.0	6.5	3.8	2.9	2.7	2.6	2.8	2.7	2.9

**DESCRIPTION:** The Bradley Base Sustainment Program initiated a program to upgrade first generation Bradleys(A0) into the A2 configuration and bridge the production gap until the introduction of the A3 upgrade vehicles. FY99 marks the third production year of the A3 configuration. The upgraded A3 Bradley Fighting Vehicle will facilitate enhanced command and control, provide greater lethality, survivability, mobility, and sustainability required to defeat current and future threat forces while remaining operationally compatible with the main battle tank.

**JUSTIFICATION:** The FY99 Budget will provide the third year of LRIP for the A3 upgrade program. The M2A3 upgrade program will provide digital communications and target acquisition upgrades required to fight as a member of the combined arms team. These vehicles will be remanufactured in the prime contractor's plant to preserve the critical skills and vendor base to allow for future modernization.

A four year multi-year contract is planned for FY's 00-03.

Exhibit P-40C Budget Item Justification Sheet					Date
Appropriation / Budget Activity/Serial No.		P-1 Item Nomenclature	February 1999		
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles		BRADLEY BASE SUSTAINMENT (M2A3) (G80717)			
Program Elements for Code B Items		Code	Other Related Program Elements		
Fiscal Year		2000	2001	2002	2003
<b>A3 Advanced Procurement Detail (in Mils):</b>					
FY TOA					
FY2000 for FY2001 (memo)		37.5			
FY2000 for FY2002 (memo)		20.3			
FY2000 for FY2003 (memo)		2.8			
FY2001 (memo)			(37.5)		
FY2001 for FY2002 (memo)			21.7		
FY2001 for FY2003 (memo)			16.6		
FY2002 (memo)				(42.0)	
FY2002 for FY2003 (memo)				13.6	
FY2003 (memo)					(33.0)



Exhibit P-5. Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			P-1 Line Item Nomenclature: BRADLEY BASE SUSTAINMENT (M2A3) (G80717)			Weapon System Type:			Date: February 1998		
WTCV Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
1. Vehicle														
2. IBAS						68348	35	1953	34785	18	1933	59134	73	810
3. FLIR						35706	35	1020	18699	18	1039	44214	73	606
4. Other GFE						20980	27	777	14377	27	532	36425	76	479
5. Reman (General Dynamics)						3212	35	92	2224	18	124	55959	73	767
6. Pre Mod Depot Maint												6049	73	83
7. SSES												4290	73	59
8. Linebacker Components														
<b>SUBTOTAL</b>			<b>128246</b>						<b>70085</b>			<b>206071</b>		
9. Engineering--Government														
10. Engineering--Contractor						7234			11777			15180		
11. Project Management Administration						25711			21422			27765		
12. Reimbursable Matrix Support						1843			1882			2314		
13. Test and Evaluation						1945			2544			2443		
						861			760			277		
<b>SUBTOTAL</b>			<b>37594</b>						<b>38385</b>			<b>47979</b>		
14. Cummins Engine Life-of-Type (LOT) Buy														
15. Peculiar Support Equipment						8038			5600			7837		
16. Classroom Spares						2000			1808			2149		
17. Fielding												8528		
<b>SUBTOTAL</b>			<b>10038</b>						<b>7408</b>			<b>18514</b>		
<b>TOTAL</b>						<b>175878</b>			<b>115878</b>			<b>272564</b>		
<b>Gross P-1 End Cost</b>						<b>175878</b>			<b>115878</b>			<b>272564</b>		
Less: Prior Year Adv Proc														
<b>Net P-1 Full Funding Cost</b>						<b>175878</b>			<b>115878</b>			<b>272564</b>		
Plus: P-1 CY Adv Proc														
Other Non P-1 Costs														
Initial Spares									293			7130		
Mods														
<b>TOTAL</b>			<b>175878</b>						<b>116171</b>			<b>279694</b>		

Exhibit P-5a, Budget Procurement History and Planning										Date:	February 1998
P-1 Line Item Nomenclature:										BRADLEY BASE SUSTAINMENT (M2A3) (G80717)	
Weapon System Type:											
Contract Method and Type										Award Date	
Location of PCO										Date of First Delivery	
Contractor and Location										QTY Each	
Unit Cost \$000										Specs Avail Now?	
Date Revisn Avail										RFP Issue Date	
WBS Cost Elements:											
Fiscal Years											
1. Vehicle											
FY 97											
FY 98											
FY 99											
2. IBAS											
FY 97											
FY 98											
FY 99											
3. FLIR											
FY 97											
FY 98											
FY 99											
REMARKS:											













Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles												BRADLEY FVS TRAINING DEVICES (320900)	
Program Elements for Code B Items:												Other Related Program Elements:	
Code: A												0203735A D371 COMBAT VEHICLE IMPROVEMENT PROGRAM	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	225.4	0.0	0.0	0.6	0.0	12.7	23.8	19.0	2.6	3.3	36.4	323.9	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	225.4	0.0	0.0	0.6	0.0	12.7	23.8	19.0	2.6	3.3	36.4	323.9	
Initial Spares	1.8											1.8	
Total Proc Cost	227.2	0.0	0.0	0.6	0.0	12.7	23.8	19.0	2.6	3.3	36.4	325.7	
Flyaway U/C													
Wpn Sys Proc U/C													

**Description:**

- Bradley Advanced Training System (BATS) - Integrated BFVS A3 crew precision gunnery training system.
- Maintenance Trainer - Replicates actual Bradley turret allowing maintainers to trouble shoot, fault isolate, and repair.
- Precision Gunnery System (PGS) - Upgrade PGS to integrate BFVS A3. Facilitates unit sustainment training between gunnery cycles.
- Bradley Desktop Trainer (BDT) - desktop computer designed to support individual and networked unit training.

**Justification:**

Introduction of the more technologically advanced Infantry Fighting Vehicle and Cavalry Fighting Vehicles into the Army inventory necessitates a redesign of existing training equipment. The rising cost of fuel, ammunition, repair parts, environment restrictions, vehicles used exclusively for training, and restriction on the availability of suitable training areas will drastically reduce the capability to provide effective, realistic training on the BFVS through the operational use of the vehicle. The goal of training devices is to provide cost effective training to the soldiers without sacrificing realism. This training equipment will be part of an overall training package which will be used to replicate or substitute for actual vehicle use.



Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles				P-1 Line Item Nomenclature: BRADLEY FVS TRAINING DEVICES (G20900)				Weapon System Type:		Date: February 1998	
WTCV Cost Elements			FY 96		FY 97		FY 98		FY 99					
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
Production:														
		1. Bradley Advanced Training System				440	1	440				6500	5	1300
		2. Maintenance Trainers										1545	4	386
		3. Precision Gunnery System										2552	25	102
		4. Bradley Desktop Trainer (BDT)										1152	96	12
Government Engineering:						131						979		
TOTAL						571						12728		

Exhibit P-5a, Budget Procurement History and Planning										Date:	February 1998
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			Weapon System Type:		P-1 Line Item Nomenclature: BRADLEY FVS TRAINING DEVICES (G20900)						
WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date	
1. Bradley Advanced Training System FY99	TBD	FFP	TBD	Nov-98	Aug-99	5	1300	N/A	N/A	N/A	
2. Maintenance Trainers FY97	TBD	FFP	TBD	Aug-98	Jan-99	1	440	N/A	N/A	N/A	
FY99	TBD	FFP	TBD	Jan-99	Jul-99	4	386	N/A	N/A	N/A	
3. Precision Gunnery System FY99	SAAB, Sweden	FFP	STRICOM	Dec-98	Aug-99	25	102	N/A	N/A	N/A	
4. Bradley Desktop Trainer FY99	UDLP	FFP	STRICOM	Nov-98	Aug-99	96	12	N/A	N/A	N/A	
REMARKS:											

Exhibit P-40, Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No:										Date:		
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles										February 1998		
P-1 Item Nomenclature:										HAB TRAINING DEVICES (G84600)		
Program Elements for Code B Items:										Other Related Program Elements:		
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty							5					5
Gross Cost	0.0	0.0	0.0	0.0	0.0	0.4	15.2	1.3	1.1	0.0	0.0	17.8
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	0.0	0.0	0.0	0.0	0.4	15.2	1.3	1.1	0.0	0.0	17.8
Initial Spares												
Total Proc Cost	0.0	0.0	0.0	0.0	0.0	0.4	15.2	1.3	1.1	0.0	0.0	17.8
Fiyaway U/C												
Wpn Sys Proc U/C												

**DESCRIPTION:** The Wolverine (Heavy Assault Bridge) simulator is an institutional operator training system (near term implementation) and will evolve into a future unit collective training system (mid to far term) implementation. Five institutional operator simulator systems will be located and housed at Ft. Leonard Wood to accomplish Advanced Individual Training (AIT) for the Military Occupational Specialty (MOS) 12B Combat Engineer on Wolverine driver/operator mission functions. Mission functions will include, driving the vehicle and conducting gap crossing operations (e.g. launch and retrieve the bridge) - day/night and in all weather/environmental conditions. Each simulator system will have the capability to train two Wolverine crews (4 MOS 12Fs) concurrently. The average student throughput is approximately 208.

**JUSTIFICATION:** The simulators will optimize training effectiveness at reduced institutional OPTEMPO costs and will minimize environmental impact to the installation.

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles				P-1 Line Item Nomenclature: HAB TRAINING DEVICES (GB4600)				Weapon System Type:		Date: February 1998	
WTCV Cost Elements			FY 96		FY 97		FY 98		FY 99					
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
Gov't Program Mgmt												386		

Exhibit P-40, Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKO CMBT VEHS / 1 / Tracked Combat Vehicles						Date: February 1998					
P-1 Item Nomenclature: BRADLEY FVS TRAINING DEVICES (MOD) (G22500)											
Program Elements for Code B Items:						Other Related Program Elements: 0203735A D371 COMBAT VEHICLE IMPROVEMENT PROGRAM					
Code: A											
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total Prog
Proc Qty											
Gross Cost	3.9	6.0	0.5	0.8	0.0	2.1	4.4	4.8	0.0	0.0	22.5
Less PY Adv Proc											
Plus CY Adv Proc											
Net Proc (P-1)	3.9	6.0	0.5	0.8	0.0	2.1	4.4	4.8	0.0	0.0	22.5
Initial Spares											
Total Proc Cost	3.9	6.0	0.5	0.8	0.0	2.1	4.4	4.8	0.0	0.0	22.5
Flyaway U/C											
Wpn Sys Proc U/C											

**DESCRIPTION:**  
Software upgrades to BFV Conduct of Fire Trainer (COFT)s, ODS COFTS, Precision Gunnery System, Bradley Advanced Training System, Bradley Desktop Trainer, and Maintenance Training Systems.

**JUSTIFICATION:**  
Since training devices now function based on software which, as the systems are upgraded/modified, the training device software must be modified to provide adequate training for the soldier. Currently fielded training devices will be upgraded to support the BFVS as system enhancements and software maturation occurs. The average soldier sustainment throughput per year is approximately 3600 for the BFV Commanders and Gunners in the units who will be receiving training on these COFTS.

## Exhibit P-40M Budget Item Justification Sheet

Date \_\_\_\_\_

February 1998

Appropriation / Budget Activity/Serial No.

### P-1 Item Nomenclature

## PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

BRADLEY FVS TRAINING DEVICES (MOD) (GZ2500)

### Program Elements for Code B Items

Code

Other Related Program Elements

Fiscal Years

Description

OSIP NO.	Classification
----------	----------------

OSIP NO.	
Software Upgrades	

OSIP NO.	Classification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	Total
Software Upgrades											
1-96-05-4513	Operational	0.0	0.8	0.0	2.1	4.4	4.8	0.0	0.0	0.0	12.1

	0.0	0.8	2.1	4.4	4.8	0.0	0.0	0.0	12.1
Totals	0.0	0.0	2.1	4.4	4.8	0.0	0.0	0.0	0.0

Item No. 5 Page 2 of 4  
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**Exhibit P-40M,  
Budget Item Justification Sheet**

INDIVIDUAL MODIFICATION														
													Date	February 1998
<b>MODIFICATION TITLE:</b> Software Upgrades 1-96-05-4513														
<b>MODELS OF SYSTEMS AFFECTED:</b> BFV COFTs, ODS COFTs, Precision Gunnery System, BATS, Bradley Desktop Trainer, Maintenance Training Systems.														
<b>DESCRIPTION / JUSTIFICATION:</b> Software updates will be required of training devices. As a system is upgraded/modified software on the training device must be modified to ensure adequate training for the soldier.														
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONE</b>														
PLANNED										ACCOMPLISHED				
Preliminary Design Review Critical Design Review Contractor Test & Evaluation Development Test & Evaluation Initial Operational Test and Evaluation IPR Production Decision TDP Available														
<b>Installation Schedule:</b>														
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001				
Totals		1	2	3	4	1	2	3	4	1	2	3	4	
Inputs														
Outputs														
Totals														
Inputs														
Outputs														
Totals														
<b>METHOD OF IMPLEMENTATION:</b> Contractor														
<b>Contract Dates:</b> FY 1997 Apr 98      FY 1998 Apr 99      FY 1999 Apr 01														
<b>Delivery Date:</b> FY 1997 Apr 00      FY 1998 Apr 01      FY 1999 Apr 01														
<b>PRODUCTION LEADTIME:</b> 24 Months														





Exhibit P-40, Budget Item Justification Sheet											February 1998	
Appropriation / Budget Activity/Serial No:											Date:	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles											FIELD ARTILLERY AMMUNITION SUPPORT VEH (G80100)	
P-1 Item Nomenclature:												
Program Elements for Code B Items:												
Other Related Program Elements:												
Code:												
A												
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty	805	48	48	36							937	
Gross Cost	408.9	50.0	58.3	39.2	0.0	0.0	0.0	0.0	0.0	0.0	556.4	
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	408.9	50.0	58.3	39.2	0.0	0.0	0.0	0.0	0.0	0.0	556.4	
Initial Spares	1.8										1.8	
Total Proc Cost	410.7	50.0	58.3	39.2	0.0	0.0	0.0	0.0	0.0	0.0	558.2	
Flyaway U/C												
Wpn Sys Proc U/C	0.5	1.0	1.2	1.1							.6	

**DESCRIPTION:**

The Field Artillery Ammunition Support Vehicle (FAASV) is a full tracked armored ammunition vehicle with onboard Ammunition Handling Equipment (AHE). The M992 is used to support the M109 Self-Propelled Howitzer (SPH). The FAASV is capable of transporting a minimum 12,000 pounds of 155mm ammunition over improved, unimproved, and/or cross-country roads. Armor shielding provides necessary ballistic protection. An armored rear door hinges upward and outward to provide the overhead ballistic protection between the FAASV and the Howitzer during loading operations. A conveyor is used for passing prepared projectiles and propellant charges from the FAASV into the supported Howitzer. Modifications to the rear door, conveyor, and propellant canister racks is incorporated to make the FAASV compatible with the M109A6 Paladin. The FAASV has the mobility equivalent to its supported Self-Propelled Howitzers. The FAASV is designed to operate in all geographical areas and climatic conditions in which the Howitzer operates. The M992A2 was type classified standard in July 1994.

**JUSTIFICATION:**

The Carrier, Ammunition, Tracked (155mm, M992A2) provides a significant improvement to the Army's offensive ground combat capability. The FAASV provides 100% increase in armor protection for the crew and ammunition, an 80% increase in Ammunition Handling Equipment (AHE) capability and a 50% increase in vehicle mobility over the current M548, which is being replaced on a one-for-one basis. Thus, high artillery firing rates can be maintained while minimizing casualties. The FAASV has a ventilated face piece Nuclear, Biological, Chemical(NBC) system, a Simplified Test Equipment - Internal Combustion Engine (STE-ICE), and an Automatic Fire Extinguisher System. The FAASV is a companion vehicle to, and is required to support the M109A6 Self-Propelled Howitzer (SPH). It also preserves a warm mobilization base for the SPH with the only tooling and experienced producer.

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			P-1 Line Item Nomenclature: FIELD ARTILLERY AMMUNITION SUPPORT VEH (G80100)			Weapon System Type:			Date: February 1988		
WTCV Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
1. Basic Vehicle		A	38361	48	799	31224	48	651	26925	36	748			
2. Engine			1334	48	28	1386	48	29	1040	36	29			
3. Roadwheels			144	48	3	144	48	3	115	36	3			
4. Track			895	48	19	779	48	16	516	36	14			
5. BII/COEI			560			1389			593					
6. Government Furnished Materiel			2519			4259			1035					
7. Engineering Change Orders			95			95			71					
8. Engineering - Government			1506			7155			3240					
9. Engineering - Contractor			2448			8589			3234					
10. Project Management Administration			600			1901			1220					
11. Systems Testing			252			332			350					
12. Fielding			1274			1061			840					
<b>TOTAL</b>			<b>49988</b>			<b>58314</b>			<b>39179</b>					

Exhibit P-5a, Budget Procurement History and Planning												Date:	February 1998								
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles				Weapon System Type:				P-1 Line Item Nomenclature: FIELD ARTILLERY AMMUNITION SUPPORT VEH (G80100)				Date									
WBS Cost Elements:		Contractor and Location		Contract Method and Type		Location of PCO		Award Date		Date of First Delivery		QTY Each		Unit Cost \$000		Specs Avail Now?		Date Revisn Avail		RFP Issue Date	
Fiscal Years																					
1. Basic Vehicle		United Defense (UDLP-GSD) York, PA		SS/FFP		TACOM		Jul-96		May-98		48		799						Jan-98	
FY 96																					
FY 97		United Defense (UDLP-GSD) York, PA		Option		TACOM		Jan-97		Nov-98		48		651							
FY 98		United Defense (UDLP-GSD) York, PA		SS/FFP		TACOM		Apr-98		May-99		36		748							
2. Engine		Detroit Diesel Detroit, MI		SS/FFP		TACOM		Jul-96		Dec-97		48		28							
FY 96																					
FY 97		Detroit Diesel Detroit, MI		SS/FFP		TACOM		Jan-97		Aug-98		48		29							
FY 98		Detroit Diesel Detroit, MI		SS/FFP		TACOM		Jan-98		Dec-98		36		29							
3. Roadwheels		North American Molded Products Hartville, OH		C/FFP		TACOM		May-96		Oct-97		48		3							
FY96																					
FY 97		North American Molded Products Hartville, OH		C/FFP		TACOM		Jan-97		May-98		48		3							
FY 98		North American Molded Products Hartville, OH		C/FFP		TACOM		Feb-98		Mar-99		36		3							
4. Track		Varec, Belgium		C/FFP		TACOM		Jul-96		Oct-97		48		19							
FY 96																					
FY 97		Detroit Diesel		C/FFP		TACOM		Sep-97		May-98		48		16							
FY 98		Detroit Diesel		C/FFP		TACOM		Feb-98		Aug-98		36		14							
REMARKS:																					







Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
PROCUREMENT OF WPNS & TRKD CMBT VEHs / 1 / Tracked Combat Vehicles												M1A2 TANK TRAINING DEVICES (GB1302)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	22.9	16.8	6.1	12.5	13.1	13.4	8.2	10.8	12.1	12.4	27.0	155.4	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	22.9	16.8	6.1	12.5	13.1	13.4	8.2	10.8	12.1	12.4	27.0	155.4	
Initial Spares													
Total Proc Cost	22.9	16.8	6.1	12.5	13.1	13.4	8.2	10.8	12.1	12.4	27.0	155.4	
Fltway U/C													
Wpn Sys Proc U/C													

**DESCRIPTION:** The family of M1A2 Training Aids, Devices, Simulators and Simulations (TADSS) will replicate actual tank performance without incurring the much higher costs of operating the tank itself.

- Advance Gunnery Training System (AGTS) - These are precision gunnery trainers which provide realistic commander and gunner training under varying scenarios.
- Maintenance Trainers - These systems provide training in essential unit and direct support/general support tasks. There are four different trainers: M1A2 Hands-on-Trainer (HOT); Hull Electrical Diagnostic/Troubleshooting (D/T) Trainer; Turret/Fire Control D/T Trainer; and Direct Support Electrical System Test Set Line Replaceable Unit (DSESTS LRU) simulators. The students (approximately 600/yr) will learn about the sub-systems and procedures for troubleshooting and fault isolating the tank system. The intended sites are Ft. Knox and Aberdeen Proving Grounds.
- SEP Integration - This funding provides for integration of SEP improvements into the various training devices impacted by those changes on the tank.

**JUSTIFICATION:** Fielding of the M1A2 Main Battle Tank requires concurrent fielding of a training support package. It is not cost effective to provide effective, realistic training on the M1A2 tanks through the operational use of the vehicle. Realistic training on a family of training devices simply makes better economic sense.

Exhibit P-5. Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			P-1 Line Item Nomenclature: M1A2 TANK TRAINING DEVICES (GB1302)			Weapon System Type:			Date: February 1998		
WTCV Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
Advance Gunnery Training System (AGTS)														
1) Production	A		1819			5684			7700			8800		
2) Government Support			206			550			550			400		
3) First Article Test			268			1171			1768			300		
4) Non Recurring Cost			2907											
<b>SUBTOTAL</b>			<b>5200</b>	<b>2</b>	<b>2600</b>	<b>7405</b>	<b>6</b>	<b>1234</b>	<b>10018</b>	<b>7</b>	<b>1431</b>	<b>9500</b>	<b>8</b>	<b>1188</b>
M1A2 Maintenance Trainers														
1) Production	A		750											
2) Government Support			183											
3) First Article Test														
4) Non Recurring Cost														
<b>SUBTOTAL</b>			<b>933</b>	<b>VAR</b>	<b>VAR</b>	<b>1941</b>	<b>VAR</b>	<b>VAR</b>	<b>VAR</b>	<b>VAR</b>	<b>VAR</b>	<b>VAR</b>	<b>VAR</b>	<b>VAR</b>
M1A2 Non System Integration Kits														
1) Production	A					1779								
2) Government Support						162								
3) First Article Test														
4) Non Recurring Cost														
<b>SUBTOTAL</b>						<b>1941</b>	<b>VAR</b>	<b>VAR</b>	<b>VAR</b>	<b>VAR</b>	<b>VAR</b>	<b>VAR</b>	<b>VAR</b>	<b>VAR</b>
M1A2 Software Upgrades														
1) Production	A					100			100			100		
2) Government Support						380			825			825		
3) First Article Test														
4) Non Recurring Cost														
<b>SUBTOTAL</b>						<b>480</b>	<b>VAR</b>	<b>VAR</b>	<b>925</b>	<b>VAR</b>	<b>VAR</b>	<b>925</b>	<b>VAR</b>	<b>VAR</b>
SEP Integration														
1) Production	A								633			2836		
2) Government Support									50			50		
3) First Article Test												100		
4) Non Recurring Cost						2720			1450					
<b>SUBTOTAL</b>						<b>2720</b>	<b>VAR</b>	<b>VAR</b>	<b>2133</b>	<b>VAR</b>	<b>VAR</b>	<b>2986</b>	<b>VAR</b>	<b>VAR</b>
<b>TOTAL</b>			<b>6133</b>			<b>12546</b>			<b>13076</b>			<b>13411</b>		



Exhibit P-5a, Budget Procurement History and Planning										Date:	February 1998			
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles					Weapon System Type:					P-1 Line Item Nomenclature: M1A2 TANK TRAINING DEVICES (GB1302)				
WBS Cost Elements: Fiscal Years		Contractor and Location		Contract Method and Type		Location of PCO		Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revis Avail	RFP Issue Date
Advance Gunnery Training System (AGTS) FY96 FY97 FY98 FY99		Lockheed Martin, Orlando, FL Lockheed Martin, Orlando, FL Lockheed Martin, Orlando, FL Lockheed Martin, Orlando, FL		C-FPI C-FPI C-FPI C-FPI		STRICOM STRICOM STRICOM STRICOM		Feb-96 Feb-97 Mar-98 Jan-99	Jul-97 Apr-98 Mar-00 Mar-01	2 6 7 8	2600 1234 1431 1188	Yes Yes	No No	N/A N/A N/A N/A
		M1A2 Maintenance Trainers FY96		C-FFP		STRICOM		Mar-96	Mar-98	VAR	VAR	Yes	No	N/A
		M1A2 Non System Integration Kits 1/ FY97		C-FFP		STRICOM		Mar-97	Jun-98	VAR	VAR	No	No	N/A
		M1A2 Software Upgrades 2/ FY97 FY98 FY99		C-FFP C-FFP C-FFP		STRICOM STRICOM STRICOM		Dec-96 Dec-97 Dec-98	Dec-97 Dec-98 Dec-99	VAR VAR VAR	VAR VAR VAR	No No No	No No No	N/A N/A N/A
SEP Integration FY97 FY98 FY99		Lockheed Martin, Orlando, FL Lockheed Martin, Orlando, FL Lockheed Martin, Orlando, FL		C-PIF C-PIF C-PIF		STRICOM STRICOM STRICOM		Jun-97 Feb-98 Feb-99	NA NA Mar-00	VAR VAR VAR	VAR VAR VAR	No No No	No No No	N/A N/A N/A
REMARKS: 1/ M1A2 Non-System Integration Kits provide system unique kits allowing the installation of Non-System Training Devices, such as Thru Sight Video (TSV), Tank Weapon Gun Simulation System (TWGSS), Precision Range Integrated Maneuver Exercise (PRIME), and Multiple Integrated Laser Engagement System (MILES) onto the M1A2 tank. 2/ M1A2 trainer software upgrades update M1A2 training devices to keep pace with changes in the M1A2 tank.														







Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
PROCUREMENT OF WPNS & TRKO CMBT VEHS / 1 / Tracked Combat Vehicles												COMMAND & CONTROL VEHICLE (GB4200)
P-1 Item Nomenclature:												
Program Elements for Code B Items:												
Other Related Program Elements:												
PE 0604640A Advanced Command and Control Vehicle												
Code: A												
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty			5	5	10	22	22	22	37	316	439	
Gross Cost	0.0	0.0	48.8	30.3	44.2	74.8	77.4	71.3	121.8	936.6	1405.2	
Less PY Adv Proc							6.5	10.1	19.0	116.5	152.1	
Plus CY Adv Proc						13.5	12.1	10.0		116.5	152.1	
Net Proc (P-1)	0.0	0.0	48.8	30.3	44.2	88.3	83.0	71.2	102.8	936.6	1405.2	
Initial Spares				0.9	2.5	2.6	0.7	1.5	1.3		9.6	
Total Proc Cost	0.0	0.0	48.8	31.2	46.7	90.9	83.7	72.7	104.1	936.6	1414.7	
Flyaway U/C												
Wpn Sys Proc U/C			9.8	6.2	4.7	4.1	3.8	3.3	2.8	3.0	3.2	
<p>DESCRIPTION: The Command and Control Vehicle (C2V), provides a fully tracked, armored vehicle based on Bradley A2 and MLRS designs and components. It will ensure a mobile, responsive, and survivable command and control capability for the heavy force, and it provides the platform to support command and control on the move. C2V was developed in response to lessons learned during Operation Desert Storm. It supports the Army Digitization Effort, incorporating communications and electronic systems compatible with Army Tactical Command and Control systems (ATCCS).</p> <p>JUSTIFICATION: This program was initiated as a result of deficiencies in existing command and control vehicles identified during Operation Desert Storm. FY99 is the 3rd year of low rate initial production.</p> <p>A four year multi-year contract is planned for FY00 through FY03.</p>												

Exhibit P-40C Budget Item Justification Sheet					Date	February 1998
Appropriation / Budget Activity/Serial No.		P-1 Item Nomenclature				
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles		COMMAND & CONTROL VEHICLE (G84200)				
Program Elements for Code B Items		Other Related Program Elements		Advanced Command and Control Vehicle		
Code		PE 0604840A				
A						
Fiscal Year		2000		2001		
2002		2003				
C2V Advanced Procurement Detail (in Mills):						
FY2000 For FY2001 (memo)		6.5				
FY2000 For FY2002 (memo)		3.6				
FY2000 For FY2003 (memo)		3.4				
FY2001 (memo)			-6.5			
FY2001 For FY2002 (memo)			6.5			
FY2001 For FY2003 (memo)			5.6			
FY2002 (memo)				-10.1		
FY2002 For FY2003				10.0		
FY2003 (memo)					-19.0	

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			P-1 Line Item Nomenclature: COMMAND & CONTROL VEHICLE (G84200)			Weapon System Type:			Date: February 1998		
WTCV Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
1.		Vehicle				12394	5	2479	14331	5	2866	23059	10	2306
2.		Engine (included in LOT buy)												
3.		Transmission				567	5	113	739	5	148	1487	10	149
4.		Primary Power Unit										1834	10	183
5.		Environmental Control Unit										406	10	41
6.		Bio Chem Unit										1139	10	114
7.		Other GFE				192	5	38	191	5	38	1256	10	126
8.		Mission Module Components				1273	5	255	1157	5	231	1908	10	191
9.		Veh Inter/Intra Communication System (VICIS)				279	5	56	255	5	51	470	10	47
SUBTOTAL			14705						16673			31559		
10.		Tooling												
11.		FAT/Qual of Vendors												
SUBTOTAL														
12.		Test				1292			666			935		
13.		Engineering - Government				8353			2725			2785		
14.		Engineering - Contractor				300			7033			6896		
15.		Project Management Administration				170			469			474		
16.		Reimbursable Matrix Support							453			503		
17.		Software Support				1996			522			282		
18.		Logistics				21950	439	50	1721			807		
19.		Cummins Engine Life-of-Type (LOT) Buy												
TOTAL			48766						30262			44241		

Exhibit P-5a, Budget Procurement History and Planning												
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles					Weapon System Type:		P-1 Line Item Nomenclature: COMMAND & CONTROL VEHICLE (GB4200)					
WBS Cost Elements: Fiscal Years		Contractor and Location		Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revis Avail	RFP Issue Date
1. Vehicle												
FY 97		UDLP, York, PA.		SS/FFP	TACOM	Dec-96	Apr-98	5	2479		No	
FY 98		UDLP, York, PA.		SS/FFP	TACOM	Dec-97	Apr-99	5	2866		No	
FY 99		UDLP, York, PA.		SS/FFP	TACOM	Dec-98	Apr-00	10	2306		No	
3. Transmission												
FY 97		GDLS, Muskegon, MI.		SS/FFP	TACOM	Mar-97	Apr-98	5	113		No	
FY 98		GDLS, Muskegon, MI.		SS/FFP	TACOM	Mar-98	Apr-99	5	148		No	
FY 99		GDLS, Muskegon, MI.		SS/FFP	TACOM	Mar-99	Apr-00	10	149		No	
4. Primary Power Unit												
FY 99		TBD		TBD	TACOM	Dec-98	Apr-00	10	183		No	
5. Environmental Control Unit												
FY 99		TBD		TBD	TACOM	Dec-98	Apr-00	10	41		No	
6. Bio Chem Unit												
FY 99		TBD		TBD	TACOM	Dec-98	Apr-00	10	114		No	
8. Mission Module Components												
FY 97		L3 Comm. Sys, Camden,NJ		FP-Op	CECOM	Feb-97	Apr-98	5	255		No	
FY 98		L3 Comm. Sys, Camden,NJ		FP-Op	CECOM	Dec-97	Apr-99	5	231		No	
FY 99		L3 Comm. Sys, Camden,NJ		FP-Op	CECOM	Dec-98	Apr-00	10	191		No	
9. Veh Inter/Intra Communication System (VIICS)												
FY 97		L3 Comm. Sys, Camden, NJ		FP	CECOM	Feb-97	Apr-98	5	56		No	
FY 98		L3 Comm. Sys, Camden, NJ		FP	CECOM	Dec-97	Apr-99	5	51		No	
FY 99		L3 Comm. Sys, Camden, NJ		FP	CECOM	Dec-98	Apr-00	10	47		No	
REMARKS: L3 Comm. Sys, Camden, NJ - L3 Communications Systems, Camden, NJ FY98: High Vehicle and Transmission cost reflects reduced business base. FY99: Breakout of Primary Power Unit, Environmental control Unit, and Bio Chem Unit.												













Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles												CARRIER, MOD (GB1930)
Program Elements for Code B Items:												P-1 Item Nomenclature:
Code:												Other Related Program Elements:
Code: A												
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty												
Gross Cost	566.7	53.1	43.7	44.7	39.4	59.4	53.6	73.6	86.1	816.3	1890.9	
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	566.7	53.1	43.7	44.7	39.4	59.4	53.6	73.6	86.1	816.3	1890.9	
Initial Spares	3.5										3.5	
Total Proc Cost	570.2	53.1	43.7	44.7	39.4	59.4	53.6	73.6	86.1	816.3	1894.4	
Fltway U/C												
Wpn Sys Proc U/C												

**DESCRIPTION:** The M113 Family of Vehicles (FOV) consists of over 18,000 vehicles, 16 different variants/platforms, in service in U.S. Army units. The M113 FOV is almost one half of the tracked combat vehicle fleet in a mechanized infantry or armor heavy division. The family provides transport for troops, anti-tank, fire direction, smoke, mortar, cargo carrier and command & control systems. The fleet is required for the next 20 plus years and must be modified to increase mobility, survivability and to install operational enhancements. Operation Desert Storm (ODS) highlighted the need to improve the mobility and survivability, chemical protection, driver's night vision, fuel system for Command Post Auxiliary Power Units (APU) for the fleet.

**JUSTIFICATION:**

1. BLOCK 1 (A3) MODIFICATION: Provides improvements to enhance mobility and crew survivability. Provides a new 275 Horse Power (HP) turbocharged engine coupled with a new transmission. This powertrain replaces less reliable components and results in reduced O&S costs while increasing mobility to keep up with the M1 and BFVS fleet. Internal spall suppression liners, external armored fuel tanks and external armor mounting provisions increase crew survivability. The intent is to convert vehicles at depot or contractor facilities to the A3 configuration, in the Department of the Army Master Priority List (DAMPPL) sequence.

2. CREW CHEMICAL PROTECTION: Provides mounting provisions and hardware and the complete M8, M13 or M14 Nuclear, Biological and Chemical (NBC) System tailored for installation into each M113 variant. The installed system includes blowers, filters, and air line heaters for use with crew issued ventilated face masks. The installed system permits vehicle operation in an NBC environment. Prior to FY98 only mounting provisions were installed during vehicle conversions to the A3 configuration. The intent is to install the complete system during future A3 conversions. Vehicle conversions will be done in Department of the Army Master Priority List (DAMPPL) sequence.





INDIVIDUAL MODIFICATION												Date	February 1998							
<b>MODIFICATION TITLE:</b> Crew Chemical Protection 1-91-05-4311																				
<b>MODELS OF SYSTEMS AFFECTED:</b> M113A3, M577A3, M1068A3																				
<b>DESCRIPTION / JUSTIFICATION:</b> Provides mounting provisions and hardware and the complete M8, M13 or M14 Nuclear, Biological and Chemical (NBC) System tailored for installation into each M113 variant. The installed system include blowers, filters, air line heaters and hoses for use with crew issued ventilated face masks. The installed system permits vehicle operation in an NBC environment. Prior to FY 98 only mounting provisions were installed during vehicle conversions to the A3 configuration. The intent is to install complete system during future A3 conversions. Vehicle conversions to be done in the Department of the Army Master Priority List (DAMPL) sequence.																				
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>																				
<b>TDP Available:</b>																				
<b>PLANNED</b> <b>ACCOMPLISHED</b> February 92																				
<b>Installation Schedule:</b>																				
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Totals																				
Inputs																				
Outputs																				
<b>Installation Schedule:</b>																				
Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete			
Inputs	50	51	51	51	60	60	60	60	60	60	60	60	60	60	60	60	3391			
Outputs	46	50	51	51	60	60	60	60	60	60	60	60	60	60	60	60	3391			
<b>METHOD OF IMPLEMENTATION:</b> Depot/Contractor <b>ADMINISTRATIVE LEADTIME:</b> 3 Months <b>PRODUCTION LEADTIME:</b> 10 Months																				
<b>Contract Dates:</b> FY 1997      FY 1998      January 98      FY 1999      January 99																				
<b>Delivery Date:</b> FY 1997      FY 1998      October 98      FY 1999      October 99																				





INDIVIDUAL MODIFICATION																					
										Date											
										February 1998											
<b>MODIFICATION TITLE:</b> Block 1 1-84-05-4026																					
<b>MODELS OF SYSTEMS AFFECTED:</b> M113A2, M577A2, M981, M1059, M1064, M1068, OSV, M58																					
<b>DESCRIPTION / JUSTIFICATION:</b> Provides improvements to enhance mobility and crew survivability. Provides a new 275 Horse Power (HP) turbocharged engine coupled with a new transmission. This powertrain replaces less reliable components and results in reduced O&S costs while increasing mobility to keep up with the M1 and BFVS fleet. Internal spall suppression liners, external armored fuel tanks and external armor mounting provisions increase crew survivability. The intent is to convert vehicles at depot or contractor facilities to the A3 configuration, in the Department of the Army Master Priority List (DAMPL) sequence.																					
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>																					
<b>PLANNED</b> <b>ACCOMPLISHED</b>																					
<b>IPR Production Decision:</b> May 86																					
<b>TDP Available:</b> June 86																					
<b>Installation Schedule:</b>																					
<b>Inputs</b>  <b>Outputs</b>	<b>Pr Yr</b>  <b>Totals</b>	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		379		40	91	154	164	174	155	60	60	60	60	60	54	54	54	54	45	45	45
				97	134	149	150	149													
<b>Inputs</b>  <b>Outputs</b>	<b>Pr Yr</b>  <b>Totals</b>	FY 2002				FY 2003				FY 2004				FY 2005				Totals			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete			
		50	51	51	51	60	60	60	60	60	60	60	60	60	60	60	60	2168			
		46	50	51	51	60	60	60	60	60	60	60	60	60	60	60	60	2168			
<b>METHOD OF IMPLEMENTATION:</b> Depot/Contractor <b>ADMINISTRATIVE LEADTIME:</b> 3 Months <b>PRODUCTION LEADTIME:</b> 10 Months																					
<b>Contract Dates:</b> FY 1997 March 97    FY 1998 January 98    FY 1999 January 99																					
<b>Delivery Date:</b> FY 1997 June 97    FY 1998 October 98    FY 1999 October 99																					

INDIVIDUAL MODIFICATION																				
Block 1 1-84-05-4026																				
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
RDT&E																				
PROCUREMENT																				
Kit Quantity	2030	223.4	304	31.2	240	25.9	216	21.1	181	22.6	203	25.4	240	35.8	240	36.3	2168	339.1	5822	760.8
Installation Kits																				
Installation Kits, Nonrecurring Equipment		3.4																	3.4	
Equipment, Nonrecurring Engineering Change Orders																				
Data		40.2		2.0		2.3		3.6		4.3		4.4		4.6		5.0		46.7		113.1
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Pre-Conversion																				
FDT		0.1		0.1		0.5		1.0		1.0		1.0		1.2		1.5		290.0		400.3
TPF		2.6		0.5		1.0		1.3		1.8		1.9		2.1		2.3		14.0		20.4
																		21.5		35.0
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	379	7.2	474	9.9															853	17.1
FY 1997 Eqpt -- Kits					304	8.7	240	7.1	216	6.8	181	5.8						304	8.7	
FY 1998 Eqpt -- Kits																		240	7.1	
FY 1999 Eqpt -- Kits																		216	6.8	
FY 2000 Eqpt -- kits																		181	5.8	
FY 2001 Eqpt -- kits																		203	6.8	
FY 2002 Eqpt -- kits																		240	7.9	
FY 2003 Eqpt -- kits																		240	7.9	
TC Equip-Kits																		2168	75.9	75.9
Total Installment	379	7.2	474	9.9	304	8.7	240	7.1	216	6.8	181	5.8	203	6.8	240	7.9	2168	75.9	4645	144.0
Total Procurement Cost		276.9		43.7		38.4		53.6		58.7		52.9		72.6		85.1		795.1		1477.0

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles												FIST VEHICLE (MOD) (GZ2300)
P-1 Item Nomenclature:												
Program Elements for Code B Items:												
Other Related Program Elements:												
Code: B												
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty				19	27	49	56	60	87	267	565	
Gross Cost	372.8	0.0	0.0	15.6	20.7	43.5	47.4	50.1	62.3	202.1	814.5	
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	372.8	0.0	0.0	15.6	20.7	43.5	47.4	50.1	62.3	202.1	814.5	
Initial Spares												
Total Proc Cost	372.8	0.0	0.0	15.6	20.7	43.5	47.4	50.1	62.3	202.1	814.5	
Flyaway U/C												
Wpn Sys Proc U/C				.8	.8	.9	.8	.8	.7	.8		

DESCRIPTION: The Bradley Fire Support Vehicle (BFIST) integrates Mission Equipment Packages into a Bradley Fighting Vehicle to support heavy maneuver force operations. The BFIST replaces the aging M981 Fire Support Vehicle for fire mission planning, support and execution for maneuver company commanders. The Fire Support Team is attached to a mechanized infantry or armor company and is primarily responsible for developing and executing fire support plans that enable success on the battlefield. The BFIST allows fire support operations to be performed on the battlefield in vehicles with the same signature, survivability, and mobility as other Bradley maneuver units.

JUSTIFICATION: The current Fire Support Vehicle M981 was unable to maintain the operational tempo of Bradley /Abrams equipped maneuver forces during Operation Desert Storm (ODS). Additionally, the M981 displayed a number of operational deficiencies and shortcomings remedied by the BFIST design. The BFIST provides synchronization of combined arms operations.

Exhibit P-5. Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			P-1 Line Item Nomenclature: FIST VEHICLE (MOD) (GZ2300)			Weapon System Type:			Date: February 1998		
WTCV			FY 96			FY 97			FY 98			FY 99		
Cost Elements			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
Hardware Cost														
1. Vehicle Upgrade														
2. Pre-Mod Depot Maintenance														
<b>SUBTOTAL</b>														
Non Recurring Production														
3. Engineering Contractor														
4. Engineering Government														
5. Program Management Administration														
6. Reimbursable Matrix Support														
7. Fielding														
8. Refurbish Test Vehicles														
<b>SUBTOTAL</b>														
<b>TOTAL</b>														

Exhibit P-5a, Budget Procurement History and Planning										Date:	February 1998
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles		Weapon System Type:		P-1 Line Item Nomenclature: FIST VEHICLE (MOD) (GZ2300)							
WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date	
1. Vehicle Upgrade FY 98 FY 99	UDLP, York, PA UDLP, York, PA	SS/FFP SS/FFP	USATACOM, Warren, MI USATACOM, Warren, MI	Dec-97 Nov-98	May-99 Jan-00	19 27	579 378				
REMARKS:											







Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles												BFVS SERIES (MOD) (GZ2400)
P-1 Item Nomenclature:												
Program Elements for Code B Items:												
Other Related Program Elements:												
Code:												
A												
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty												
Gross Cost	503.1	90.2	88.6	113.6	59.0	1.7	7.4	4.0	7.6	0.0	935.2	
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	503.1	90.2	88.6	113.6	59.0	1.7	7.4	4.0	7.6	0.0	935.2	
Initial Spares												
Total Proc Cost	503.1	90.2	88.6	113.6	59.0	1.7	7.4	4.0	7.6	0.0	935.2	
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The funds appropriated, budgeted, and programmed in this budget line will provide for the procurement and application of modification kits for the Bradley Fighting Vehicle. The Operation Desert Storm improvements are 6 ECPs which will correct deficiencies identified in Operation Desert Storm and include: Laser Range Finder, Position Navigation System, Equipment Restow Improvement, Combat Identification System, Drivers Vision Enhancer and Missile Countermeasure Device. The A1 to A2 conversion effort increases the vehicle survivability and brings the vehicle up to the current A2 configuration, with the addition of the High Survivability Kit and the 600HP power pack. Operational improvements are the Transmission Electronic Controller, the Armament Control Unit Pillow Block, the Vehicle Intercommunications System, and Armor Tiles. One safety mod, the A2 Card Retrofit, will prevent inadvertent TOW missile launch. The A2 ODS Applique(+) modification will integrate Bradley Fighting Vehicles with the Army's Applique computer system to improve situational awareness. Additionally, there is the Presidentially directed HALON Replacement Program. Most of these modifications will be applied concurrently in "blocks" to reduce application cost and inconvenience to the unit.

JUSTIFICATION: The programs in these P-Forms were initiated to meet requirements identified to correct deficiencies identified in Operation Desert Storm and to improve the lethality, survivability, mobility and situational awareness of the Bradley Fighting Vehicle. Reduced Bradley Fighting Vehicle capability, survivability, and mobility will occur if these modifications are delayed or reduced.

Exhibit P-40M Budget Item Justification Sheet											
Appropriation / Budget Activity/Serial No.				Date		February 1998					
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles				P-1 Item Nomenclature		BFVS SERIES (MOD) (GZ2400)					
Program Elements for Code B Items		Code		Other Related Program Elements							
Description		Fiscal Years									
OSIP NO.	Classification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	Total
A1-A2 Conversion											
1-84-05-4038	Oper. Capability	347.3	16.4	16.8	13.6	0.0	0.0	0.0	0.0	0.0	394.1
A2 ODS Mods											
1-92-05-4404	Oper. Capability	67.2	49.6	28.9	31.9	1.6	0.0	0.0	0.0	0.0	179.2
Transmission Electronic Controller (TEC)											
1-90-05-4282	Oper. Capability	5.8	4.1	3.6	0.0	0.0	0.0	0.0	0.0	0.0	13.5
ACU Pillow Block Mod											
1-91-05-4314	Oper. Capability	5.8	0.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	7.2
Vehicle Intercom System											
1-90-05-4284	Oper. Capability	8.4	3.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	15.3
DECA											
1-93-05-4441	Oper. Capability	11.5	5.7	1.4	2.5	0.0	0.0	0.0	0.0	0.0	21.1
HALON Replacement											
1-92-05-4422	Legisl. Compliance	3.7	0.6	4.7	0.1	0.1	0.0	0.0	0.0	0.0	9.2
Armor Tiles											
1-84-05-4038	Oper. Capability	40.6	32.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	73.3
A2 Card Retrofit											
1-96-05-4517	safety	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Suite of Survivability Enhancement Systems (No P3a Set)											
1-96-05-4514	Oper. Capability	0.0	0.0	0.0	0.0	0.0	7.4	4.0	7.6	0.0	19.0
A2 ODS Applique											
1-98-05-4539	Operational Capability	0.0	0.0	0.0	10.9	0.0	0.0	0.0	0.0	0.0	10.9
Totals		490.3	113.6	60.0	59.0	1.7	7.4	4.0	7.6	0.0	743.6

INDIVIDUAL MODIFICATION												Date	February 1998		
<b>MODIFICATION TITLE:</b> A1-A2 Conversion 1-84-05-4038															
<b>MODELS OF SYSTEMS AFFECTED:</b> M2A1 (IFV) / M3A1 (CFV)															
<b>DESCRIPTION / JUSTIFICATION:</b> The BFVS conversion effort converts the A1 configuration to an A2 configuration. The conversion effort includes: 1. High Survivability (HS) Kit which will enhance vehicle survivability through the application of alternate armor and selective use of crew compartment spall liners for increased protection against threat from frontal attack. The HS kit also contains other associated changes such as restowage, swim curtain, IFV firing ports, and M240 gun upright. 2. The 600HP power pack, which includes the 600 HP engine and the reliability improved 500-3 Transmission which eliminates the adverse impact of increased vehicle weight on vehicle performance and reliability, resulting from High Survivability changes.															
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>												<b>PLANNED</b>		<b>ACCOMPLISHED</b>	
Preliminary Design Review: NA Critical Design Review: NA Contractor Test and Evaluation: NA Development Test and Evaluation: NA Initial Operational Test and Evaluation: NA IPR Production Decision: 3Q89 TDP Available: 3Q89															
<b>Installation Schedule:</b>															
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001					
Totals		1	2	3	4	1	2	3	4	1	2	3	4		
Inputs		938	42	42	42	42	42	42	42	42	42	42	42		
Outputs		896	42	42	42	42	42	42	42	42	42	42	42		
Totals		FY 2002		FY 2003		FY 2004		FY 2005		FY 2006		Totals			
Inputs		1	2	3	4	1	2	3	4	1	2	3	4		
Outputs		1358	42	42	42	42	42	42	42	42	42	42	42		
<b>METHOD OF IMPLEMENTATION:</b> Depot Conversion <b>ADMINISTRATIVE LEADTIME:</b> 6 Months <b>PRODUCTION LEADTIME:</b> 12 Months															
<b>Contract Dates:</b> FY 1997 Jan 97    FY 1998 Jan 98    FY 1999 Jan 99															
<b>Delivery Date:</b> FY 1997 Jan 98    FY 1998 Jan 98    FY 1999 Jan 99															

INDIVIDUAL MODIFICATION													
Date February 1998													
MODIFICATION TITLE (Cont): A1-A2 Conversion 1-84-05-4038													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E		115.6											115.6
PROCUREMENT													
Kit Quantity													
Installation Kits													
Installation Kits Nonrecurring													
600 HP Engine	1317	45.6	41	1.9									47.5
500-3 Transmission	1358	39.2											39.2
High Survivability kits	1358	187.9		2.5									190.4
Engineering Change Orders		0.9											0.9
Training Equipment													
Support Equipment													
Other		1.6		0.8									2.5
Interim Contractor Support						6.2							6.2
Pre-mod Depot Maintenance													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits	977	72.1	136	11.2	168	16.8	36	3.4					103.5
FY 1997 Eqpt -- Kits							41	3.9					3.9
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installment	977	72.1	136	11.2	168	16.8	77	7.3					107.4
Total Procurement Cost		347.3		16.4		16.8		13.6					394.1

INDIVIDUAL MODIFICATION												Date	February 1998																																																																																																								
MODIFICATION TITLE: A2 ODS Mods 1-92-05-4404																																																																																																																					
MODELS OF SYSTEMS AFFECTED: M2A2/M3A2																																																																																																																					
<b>DESCRIPTION / JUSTIFICATION:</b> Six vehicle improvements (ECP's) which will correct deficiencies identified in Operation Desert Storm. These increase vehicle lethality and survivability and situational awareness. Additionally, included in this effort are Armored Hatches to further improve vehicle survivability. a. Laser Range Finder: will give the BFVS a first burst on target capability and reduce the time required to acquire and kill a target. b. Position Navigation System: Global Positioning System (GPS) integrating hardware and a self calibrating digital compass. This will enable the Bradley commander to determine his exact location at all times and determine the heading and distance to any location. c. Equipment Restow Improvement: Improves the method of stowing internal and external equipment. d. Combat Identification System (CID): Provides integration hardware for the passive CID system that will provide visual and thermal signatures detectable between ground to ground vehicles and from air to ground. e. Driver's Thermal Viewer: Increases the driver's ability to see through battlefield obscuration such as dust, fog and smoke during night and day. f. Missile Countermeasure Device: Provides additional protection against a variety of anti tank missiles.																																																																																																																					
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> Preliminary Design Review: 4Q93 Critical Design Review: 2Q94 Contractor Test and Evaluation: 3Q94 Development Test and Evaluation: 4Q94 Initial Operational Test and Evaluation: 1Q95 IPR Production Decision: 2Q95																																																																																																																					
<b>Installation Schedule:</b> <table border="1"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</td> <td>26</td><td>93</td><td>124</td><td>124</td> <td>95</td><td>115</td><td>104</td><td>147</td> <td>72</td><td>57</td><td>89</td><td>126</td> <td>105</td><td>105</td><td></td><td></td> <td>17</td><td>17</td><td>16</td><td>16</td> </tr> <tr> <td>Outputs</td> <td>26</td><td>93</td><td>124</td><td>124</td> <td>95</td><td>115</td><td>104</td><td>147</td> <td>72</td><td>57</td><td>89</td><td>126</td> <td>105</td><td>105</td><td></td><td></td> <td>17</td><td>17</td><td>16</td><td>16</td> </tr> </tbody> </table>														Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs	26	93	124	124	95	115	104	147	72	57	89	126	105	105			17	17	16	16	Outputs	26	93	124	124	95	115	104	147	72	57	89	126	105	105			17	17	16	16
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																	
Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																	
Inputs	26	93	124	124	95	115	104	147	72	57	89	126	105	105			17	17	16	16																																																																																																	
Outputs	26	93	124	124	95	115	104	147	72	57	89	126	105	105			17	17	16	16																																																																																																	
<table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th rowspan="2">To Complete</th> <th rowspan="2">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td>15</td><td>14</td><td>14</td><td>14</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td>1493</td> </tr> <tr> <td>Outputs</td> <td>15</td><td>14</td><td>14</td><td>14</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td>1493</td> </tr> </tbody> </table>															FY 2002				FY 2003				FY 2004				FY 2005				To Complete	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs	15	14	14	14														1493	Outputs	15	14	14	14														1493																															
	FY 2002				FY 2003				FY 2004				FY 2005				To Complete	Totals																																																																																																			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																					
Inputs	15	14	14	14														1493																																																																																																			
Outputs	15	14	14	14														1493																																																																																																			
<b>METHOD OF IMPLEMENTATION:</b> Contr/Depot/Field Contract Dates: FY 1997 Jan 97 FY 1998 Jan 98 FY 1999 Jan 99 Delivery Date: FY 1997 Jan 98 FY 1998 Jan 99 FY 1999 Jan 00 ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 12 Months																																																																																																																					

INDIVIDUAL MODIFICATION													
A2 ODS Mods 1-92-05-4404													
MODIFICATION TITLE (Cont):													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E													
PROCUREMENT													
Kit Quantity	690	63.3	415	45.3	215	28.9	173	25.5					1493
Installation Kits													163.1
Installation Kits, Nonrecurring													
Equipment													
Equipment, Nonrecurring		1.9											1.9
Engineering Change Orders													
Data													
Training Equipment													
Support Equipment		0.2											0.2
Other													
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits	193	1.8	356	4.2									549
FY 1997 Eqpt -- Kits													6.0
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits							122	6.4	116	1.6			122
FY 2000 Eqpt -- kits													6.4
FY 2001 Eqpt -- kits													116
FY 2002 Eqpt -- kits													1.6
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installment	193	1.8	356	4.2			122	6.4	116	1.6			787
Total Procurement Cost		67.2		49.6		28.9		31.9		1.6			179.2

NOTE: Application quantities and costs reflect kits applied by field retrofit only. Costs for ODS application during AO-A2 remanufacture and A1-A2 conversion are reflected on their respective P-forms.

INDIVIDUAL MODIFICATION																					
														Date							
														February 1998							
<b>MODIFICATION TITLE:</b> Transmission Electronic Controller (TEC) 1-90-05-4282																					
<b>MODELS OF SYSTEMS AFFECTED:</b> M2A2/M3A2																					
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The Transmission Electronic Controller (TEC) replaces the hydromechanical transmission control with an electromechanical control. The TEC directly improves transmission maintainability and reliability. The control features of TEC will provide improved acceleration, fuel utilization and hot and cold performance, and better low speed maneuverability.</p>																					
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <p>IPR Production Decision: 2Q94            TDP Available: 2Q94</p>																					
<b>Installation Schedule:</b>																					
<b>Inputs</b>  <b>Outputs</b>	Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	26	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
<b>Inputs</b>  <b>Outputs</b>	Totals	26	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820
	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820
<b>METHOD OF IMPLEMENTATION:</b> Contr/depot/field <b>ADMINISTRATIVE LEADTIME:</b> 6 Months <b>PRODUCTION LEADTIME:</b> 8 Months																					
<b>Contract Dates:</b> FY 1997    Dec 97    FY 1998    Dec 98    FY 1999    Dec 99																					
<b>Delivery Date:</b> FY 1997    Aug 98    FY 1998    Aug 99    FY 1999    Aug 99																					

INDIVIDUAL MODIFICATION													
Transmission Electronic Controller (TEC) 1-90-05-4282													
MODIFICATION TITLE (Cont):													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E													
PROCUREMENT													
Kit Quantity													
Installation Kits	333	5.8	256	4.1	231	3.6							820
Installation Kits, Nonrecurring Equipment													
Equipment, Nonrecurring													
Engineering Change Orders													
Data													
Training Equipment													
Support Equipment													
Other													
Interim Contractor Support													
NOTE: Application is budgeted as part of the A2 ODS program													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits													
FY 1997 Eqpt -- Kits													
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installment													
Total Procurement Cost		5.8		4.1		3.6							13.5



INDIVIDUAL MODIFICATION													
										Date	February 1998		
<b>MODIFICATION TITLE:</b> ACU Pillow Block Mod 1-91-05-4314													
<b>MODELS OF SYSTEMS AFFECTED:</b> TOW 2 SUBSYSTEM													
<b>DESCRIPTION / JUSTIFICATION:</b> <p>This block modification combines 5 class 1 ECPs into a consolidated block ACU package. The ACU is part of the TOW missile launcher. These modifications will seal against moisture and eliminate pillow block associated damage to the ACU which can result in critical failures of the TOW weapon system package.</p>													
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>													
										<u>Planned</u>		<u>Accomplished</u>	
										NA		NA	
										NA		NA	
										NA		NA	
										NA		NA	
										NA		NA	
										1Q92		1Q92	
										NA		NA	
<b>Preliminary Design Review:</b> <b>Critical Design Review:</b> <b>Contractor Test and Evaluation:</b> <b>Development Test and Evaluation:</b> <b>Initial Operational Test and Evaluation:</b> <b>IPR Production Decision</b> <b>TDP Available:</b>													
<b>Installation Schedule:</b>													
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4			
<b>Totals</b>													
Inputs		1874 334 334 334		267 266 267 266									
Outputs		1874 334 334 334		267 266 267 266									
<b>Totals</b>													
Inputs		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4			
Outputs													
<b>Totals</b>													
Inputs													
Outputs													
<b>Totals</b>													
<b>METHOD OF IMPLEMENTATION:</b> Contractor teams <b>ADMINISTRATIVE LEADTIME:</b> <b>PRODUCTION LEADTIME:</b>													
<b>Contract Dates:</b> FY 1997 Mar 97      FY 1998 Mar 98      FY 1999													
<b>Delivery Date:</b> FY 1997 N/A      FY 1998 N/A      FY 1999													

INDIVIDUAL MODIFICATION																				
ACU Pillow Block Mod 1-91-05-4314																				
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	4275	4.5																	4275	4.5
Installation Kits																				
Installation Kits, Nonrecurring Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	1874	1.3	1335	0.9	1066	0.6													4275	2.8
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	1874	1.3	1335	0.9	1066	0.6													4275	2.8
Total Procurement Cost		5.8		0.9		0.6														7.2

INDIVIDUAL MODIFICATION															Date	February 1998												
MODIFICATION TITLE: Vehicle Intercom System 1-90-05-4284																												
MODELS OF SYSTEMS AFFECTED: A2 ODS M2/M3																												
DESCRIPTION / JUSTIFICATION:																												
<p>The VIS system is a replacement for the AN/VIC-1 intercom system. It is a digital intercom system which provides internal communications as well as access to the vehicle radios. This is a non-developmental item to be applied to the A2 ODS vehicles.</p>																												
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																												
										<u>PLANNED</u>				<u>ACCOMPLISHED</u>														
Preliminary Design Review:										NA				NA														
Critical Design Review:										NA				NA														
Contractor Test and Evaluation:										NA				NA														
Development Test and Evaluation:										NA				NA														
Initial Operational Test and Evaluation:										2Q95				2Q95														
IPR Production Decision										3Q95				3Q95														
TDP Available:										NA				NA														
Installation Schedule:																												
Pr Yr		FY 1997				FY 1998				FY 1999				FY 2000				FY 2001										
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4							
Totals		26	49	49	80	78	38	57	46	88	72	57	89	126	105	105												
Inputs		26	49	49	80	78	38	57	46	88	72	57	89	126	105	105												
Outputs																												
Totals		FY 2002				FY 2003				FY 2004				FY 2005				To										
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete										
Inputs																												
Outputs																												
Totals		960																										
Inputs		960																										
Outputs																												
METHOD OF IMPLEMENTATION: Contractor/Depot																	ADMINISTRATIVE LEADTIME: 6 Months				PRODUCTION LEADTIME: 6 Months							
Contract Dates:																	FY 1997 Mar 97				FY 1998 Mar 98				FY 1999 Mar 99			
Delivery Date:																	FY 1997 Sep 97				FY 1998 Sep 98				FY 1999 Sep 99			

INDIVIDUAL MODIFICATION																		
Date																		
February 1998																		
Vehicle Intercom System 1-90-05-4284																		
MODIFICATION TITLE (Cont):																		
FINANCIAL PLAN: (\$ in Millions)																		
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																		
PROCUREMENT																		
Kit Quantity	553	8.4	262	3.0	145	3.9											960	15.3
Installation Kits																		
Installation Kits, Nonrecurring Equipment																		
Equipment, Nonrecurring																		
Engineering Change Orders																		
Data																		
Training Equipment																		
Support Equipment																		
Other																		
Interim Contractor Support																		
APPLICATION SCHEDULED AND BUDGETED AS PART OF A2QDS PROGRAM																		
Installation of Hardware																		
FY 1996 & Prior Eqpt -- Kits																		
FY 1997 Eqpt -- Kits																		
FY 1998 Eqpt -- Kits																		
FY 1999 Eqpt -- Kits																		
FY 2000 Eqpt -- kits																		
FY 2001 Eqpt -- kits																		
FY 2002 Eqpt -- kits																		
FY 2003 Eqpt -- kits																		
TC Equip-Kits																		
Total Installation																		
Total Procurement Cost		8.4		3.0		3.9												15.3

INDIVIDUAL MODIFICATION														
										Date		February 1998		
<b>MODIFICATION TITLE:</b> DECA 1-93-05-4441														
<b>MODELS OF SYSTEMS AFFECTED:</b> M2A2/M3A2														
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The DECA is the microprocessor based controller of the turret drive system. It transfers signals from crew and sensor inputs to the appropriate subsystem to execute a specific task. The DECA replaces the Electronic Control Assembly (ECA) and provides built in testing, improved reliability and elimination of hull and turret gyro.</p>														
<div style="display: flex; justify-content: space-between;"> <div> <b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>            Preliminary Design Review: NA            Critical Design Review: NA            Contractor Test and Evaluation: NA            Development Test and Evaluation: NA            Initial Operational Test and Evaluation: NA            IPR Production Decision: 3Q89            TDP Available: 3Q89         </div> <div> <b>PLANNED</b>            NA            NA            NA            NA            NA            3Q89            3Q89         </div> <div> <b>ACCOMPLISHED</b> </div> </div>														
<b>Installation Schedule:</b>														
		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001				
Pr Yr		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4				
Totals		26 49 49 80		38 57 57 46		72 57 57 46		85 66 66 66		85 66 66 66				
Inputs		26 49 49 80		38 57 57 46		72 57 57 46		85 66 66 66		85 66 66 66				
Outputs		26 49 49 80		38 57 57 46		72 57 57 46		85 66 66 66		85 66 66 66				
		FY 2002		FY 2003		FY 2004		FY 2005		To				
Totals		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4		Complete				
Inputs		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4		Complete				
Outputs		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4		Complete				
Totals		841 841		841 841		841 841		841 841		841 841				
<b>METHOD OF IMPLEMENTATION:</b> Contractor & Depot ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 8 Months														
<b>Contract Dates:</b> FY 1997 Jan 97 FY 1998 Jan 98 FY 1999 Jan 99														
<b>Delivery Date:</b> FY 1997 Sep 97 FY 1998 Sep 98 FY 1999 Sep 99														

INDIVIDUAL MODIFICATION														Date	February 1998					
MODIFICATION TITLE (Cont):														DECA 1-93-05-4441						
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring Equipment	450	11.5	233	5.7	58	1.4	100	2.5											841	21.1
Equipment, Nonrecurring Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
APPLICATION BUDGETED AS PART OF A1-A2 CONVERSION AND A2 ODS APPLICATION																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost		11.5		5.7		1.4		2.5												21.1

INDIVIDUAL MODIFICATION																																																																																																																																																																																																																																																																																																		
														Date																																																																																																																																																																																																																																																																																				
														February 1998																																																																																																																																																																																																																																																																																				
<b>MODIFICATION TITLE:</b> HALON Replacement 1-92-05-4422																																																																																																																																																																																																																																																																																																		
<b>MODELS OF SYSTEMS AFFECTED:</b> Bradley Fighting Vehicle System																																																																																																																																																																																																																																																																																																		
<b>DESCRIPTION / JUSTIFICATION:</b>																																																																																																																																																																																																																																																																																																		
The Halon replacement program is in response to DOD and Army policy to eliminate the unnecessary release of Halon into the atmosphere. This program will provide an alternate agent to use in the BFV engine compartment fire extinguishers.																																																																																																																																																																																																																																																																																																		
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>																																																																																																																																																																																																																																																																																																		
										3Q95 4Q96 NA 4Q96 NA 2Q98 2Q98																																																																																																																																																																																																																																																																																								
										1Q96 1Q97 NA NA NA																																																																																																																																																																																																																																																																																								
<b>Installation Schedule:</b>																																																																																																																																																																																																																																																																																																		
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INDIVIDUAL MODIFICATION													
MODIFICATION TITLE (Cont): HALON Replacement 1-92-05-4422													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E													
PROCUREMENT													
Kit Quantity													
Installation Kits					6720	4.4							6720
Installation Kits, Nonrecurring													
Equipment													
Equipment, Nonrecurring													
Engineering Changes Orders													
Engineering Changes Orders													
Data													
Training Equipment													
Support Equipment													
Other													
Interim Contractor Support													
NOTE: Installation quantity and cost reflect field retrofit only. Applications occurring during A1-A2 conversion, A0-A2 remanufacture and ODS field retrofit are reflected on their respective P-Forms.													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits													
FY 1997 Eqpt -- Kits					160	0.0	2835	0.1	2835	0.1			5630
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installation					160	0.0	2835	0.1	2835	0.1			5630
Total Procurement Cost						4.7		0.1		0.1			9.2



INDIVIDUAL MODIFICATION																																																																																
												Date		February 1998																																																																		
<b>MODIFICATION TITLE:</b> Armor Tiles 1-84-05-4038																																																																																
<b>MODELS OF SYSTEMS AFFECTED:</b> M2A2(IFV)/M3A2(CFV)																																																																																
<b>DESCRIPTION / JUSTIFICATION:</b>  Armor tiles are one of the High Survivability improvements to the BFVS. The tiles provide increased armor protection for shaped charge threats, including hand held heat and other classes of warheads as specified in the BFVS material need area. There are 5 configurations of tiles covering the vehicle front, sides and turret.																																																																																
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>             Preliminary Design Review: NA            Critical Design Review: 3Q90            Contractor Test and Evaluation: NA            Development Test and Evaluation: NA            Initial Operational Test and Evaluation: NA            IPR Production Decision: 2Q92            TDP Available: NA         </div> <div style="width: 50%; text-align: center;"> <b>PLANNED</b> </div> <div style="width: 50%; text-align: center;"> <b>ACCOMPLISHED</b> </div> </div>																																																																																
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		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001																																																																						
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		FY 2002		FY 2003		FY 2004		FY 2005		Totals																																																																						
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Totals		1	2	3	4	1	2	3	4	1	2	3	4																																																																			
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<b>METHOD OF IMPLEMENTATION:</b> Troop installed																																																																																
<b>Contract Dates:</b> FY 1997 Sep 97																																																																																
<b>Delivery Date:</b> FY 1997 Jan 99																																																																																
<b>ADMINISTRATIVE LEADTIME:</b> 6 Months																																																																																
<b>PRODUCTION LEADTIME:</b> 6 Months																																																																																
FY 1999 FY 1999																																																																																

INDIVIDUAL MODIFICATION													
Armor Tiles 1-84-05-4038													
MODIFICATION TITLE (Cont):													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E		4.0											4.0
PROCUREMENT													
Kit Quantity													
Installation Kits	136	34.3	110	23.5									246
Installation Kits, Nonrecurring													
Equipment													
Equipment, Nonrecurring													
Engineering Change Orders				0.5									0.5
Data													
Training Equipment													
Support Equipment													
Other		6.3		8.8									15.1
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits													
FY 1997 Eqpt -- Kits													
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installation		40.6		32.7									73.3
Total Procurement Cost													



INDIVIDUAL MODIFICATION														Date	February 1998					
MODIFICATION TITLE (Cont):														A2 Card Retrofit 1-96-05-4517						
FINANCIAL PLAN: (\$ In Millions)																				
RDT&E PROCUREMENT Kit Quantity Installation Kits Installation Kits, Nonrecurring Equipment Equipment, Nonrecurring Engineering Change Orders Data Training Equipment Support Equipment Other Interim Contractor Support	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
			3258	0.8															3258	0.8
NOTE: Application costs are included in procurement unit price.																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost																				
				0.8																0.8

INDIVIDUAL MODIFICATION																																																																																																																																																																																																																										
Date													February 1998																																																																																																																																																																																																													
<b>MODIFICATION TITLE:</b> A2 ODS Applique 1-98-05-4539																																																																																																																																																																																																																										
<b>MODELS OF SYSTEMS AFFECTED:</b> Bradley Fighting Vehicle Systems																																																																																																																																																																																																																										
<b>DESCRIPTION / JUSTIFICATION:</b> <p> <u>ODS Vehicle Applique:</u> For Force XXI and the First Digitized Division, the Bradley Infantry vehicles will be integrated with the Army's Applique (+) computer system. The integration kit will include mounting the flat panel display, keyboard and CPU inside of the Bradley Turret and interfacing the vehicle systems (Bradley Eyesafe Laser Rangefinder and Position/Navigation System) to to applique (+) to provide Laser Designation and Steer-to capability. The Bradley Infantry variant will also include an additional display in the hull for squad situational awareness and an external turret mounted display for the Bradley commander's awareness while commanding from a "name tag defilade" position.           </p> <p> <u>M2A3 Vehicle Applique:</u> M2A3 will incorporate the Army's embedded Battle Command Software into the vehicle's turret computer to ensure interoperability with FBCB2. PM Bradley jointly with PM Abrams is working a common integration approach that consists of utilizing the GCSS common processor card (Power PC-VME card). This will be an additional processor card required for the M2A3 to incorporate EBC.           </p>																																																																																																																																																																																																																										
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <table style="width:100%; border: none;"> <tr> <td style="width:50%; vertical-align: top;"> <b>PLANNED</b>            Preliminary Design Review: 7/95            Critical Design Review: 1/96            LUT: 9/98            IOT&amp;E: 10/99            MS III: 11/99         </td> <td style="width:50%; vertical-align: top;"> <b>ACTUAL</b>            7/95            1/96         </td> </tr> </table>															<b>PLANNED</b> Preliminary Design Review: 7/95 Critical Design Review: 1/96 LUT: 9/98 IOT&E: 10/99 MS III: 11/99	<b>ACTUAL</b> 7/95 1/96																																																																																																																																																																																																										
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<b>METHOD OF IMPLEMENTATION:</b> Contractor applied <b>Contract Dates:</b> FY 1997 <b>Delivery Date:</b> FY 1997																																																																																																																																																																																																																										
<b>ADMINISTRATIVE LEADTIME:</b> 9 Months <b>PRODUCTION LEADTIME:</b> 12 Months FY 1998 Jun 99 FY 1999 Jun 00																																																																																																																																																																																																																										

INDIVIDUAL MODIFICATION																				
MODIFICATION TITLE (Cont):												Date								
A2 ODS Applique 1-98-05-4539														February 1998						
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity							69	7.0											69	7.0
ODS Installation Kits								0.5												0.5
ODS Nonrecurring							126	2.9											126	2.9
A3 Installation Kits								0.5												0.5
A3 Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
NOTE: Application costs are included in procurement cost.																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment								10.9												10.9
Total Procurement Cost																				

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles												P-1 Item Nomenclature:
Program Elements for Code B Items:												HOWITZER, MED SP FT 155MM M109A6 (MOD) (GA0400)
Other Related Program Elements:												
Code:												A
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	698.5	226.9	282.0	95.4	72.8	11.3	9.1	5.5	0.1	0.0	9.5	1411.2
Less PY Adv Proc	16.3											16.3
Plus CY Adv Proc	16.3											16.3
Net Proc (P-1)	698.5	226.9	282.0	95.4	72.8	11.3	9.1	5.5	0.1	0.0	9.5	1411.2
Initial Spares	1.6	1.9	2.4	6.4	3.6							15.9
Total Proc Cost	700.1	228.8	284.4	101.8	76.4	11.3	9.1	5.5	0.1	0.0	9.5	1427.1
Flyaway U/C												
Wpn Sys Proc U/C												
<b>DESCRIPTION:</b>  Funds the procurement of approved modifications to the 155MM M109 Self-Propelled Howitzer. The fiscal program identified herein reflects the economies and efficiencies of a competitive multiyear contract strategy. (See detailed description/justification on following exhibit P-3A)												
<b>COOPERATIVE AGREEMENTS:</b> The Government of the United States of America , as represented by the Department of the Army (DA), and the Government of Israel (GOI), as represented by the Ministry of Defense (MOD), agreed to cooperate on a joint development project to improve the M109 Series 155mm Self-Propelled Howitzer in November 1985. This program incorporated already developed items, together with items which were developed under contract, into prototype M109s. DA and MOD supplied their own M109s for prototype work. GOI funding for its share of the program was \$30.7 million over Fiscal Years (FY) 1986-1990. The U.S. Howitzer is currently in the full scale production phase and has been named the M109A6 Paladin. The U.S./Israeli Joint Development Agreement has expired effective with the Paladin Milestone III Full Scale Production Decision . The system developer, BMY, a Division of Harsco Corporation, was awarded a full scale engineering development contract in October 1985, and a low rate production contract in September 1990. In April 1993, FMC Corporation (now known as United Defense, Limited Partnership, Paladin Production Division) won a competitive multiyear procurement contract for full scale production of remaining Paladin requirements during FY 1993-1996 programs.												

## Exhibit P-40M Budget Item Justification Sheet

Date \_\_\_\_\_

February 1998

Appropriation / Budget Activity/Serial No.

**P-1 Item Nomenclature**

## PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

HOWITZER, MED SP FT 155MM M109A6 (MOD) (GA0400)

### Program Elements for Code B Items

Code

[illegible]

Fiscal Years

Description

OSIP NO.	Classification
----------	----------------

## Howitzer Improvement Program

1-81-05-1002 unclassified

## Chlorofluorocarbon (CFC) Elimination

1-96-05-1003 unclassified

**Totals**

OSIP NO.	Classification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	Total
Howitzer Improvement Program											
1-81-05-1002	unclassified	1,207.4	95.4	66.5	11.3	9.1	5.5	0.1	0.0	0.0	1,395.3
Chlorofluorocarbon (CFC) Elimination											
1-96-05-1003	unclassified	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	9.5	15.
Totals		1,207.4	95.4	72.8	11.3	9.1	5.5	0.1	0.0	9.5	1,411.

[illegible]

Emotion (G)	1993-1995	1995-1997	1997-1999	1999-2003	2003-2005	2005-2007	2007-2009	2009-2011	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	2023-2025	2025-2027	2027-2029	2029-2031	2031-2033	2033-2035	2035-2037	2037-2039	2039-2041	2041-2043	2043-2045	2045-2047	2047-2049	2049-2051	2051-2053	2053-2055	2055-2057	2057-2059	2059-2061	2061-2063	2063-2065	2065-2067	2067-2069	2069-2071	2071-2073	2073-2075	2075-2077	2077-2079	2079-2081	2081-2083	2083-2085	2085-2087	2087-2089	2089-2091	2091-2093	2093-2095	2095-2097	2097-2099	2099-2101	2101-2103	2103-2105	2105-2107	2107-2109	2109-2111	2111-2113	2113-2115	2115-2117	2117-2119	2119-2121	2121-2123	2123-2125	2125-2127	2127-2129	2129-2131	2131-2133	2133-2135	2135-2137	2137-2139	2139-2141	2141-2143	2143-2145	2145-2147	2147-2149	2149-2151	2151-2153	2153-2155	2155-2157	2157-2159	2159-2161	2161-2163	2163-2165	2165-2167	2167-2169	2169-2171	2171-2173	2173-2175	2175-2177	2177-2179	2179-2181	2181-2183	2183-2185	2185-2187	2187-2189	2189-2191	2191-2193	2193-2195	2195-2197	2197-2199	2199-2201	2201-2203	2203-2205	2205-2207	2207-2209	2209-2211	2211-2213	2213-2215	2215-2217	2217-2219	2219-2221	2221-2223	2223-2225	2225-2227	2227-2229	2229-2231	2231-2233	2233-2235	2235-2237	2237-2239	2239-2241	2241-2243	2243-2245	2245-2247	2247-2249	2249-2251	2251-2253	2253-2255	2255-2257	2257-2259	2259-2261	2261-2263	2263-2265	2265-2267	2267-2269	2269-2271	2271-2273	2273-2275	2275-2277	2277-2279	2279-2281	2281-2283	2283-2285	2285-2287	2287-2289	2289-2291	2291-2293	2293-2295	2295-2297	2297-2299	2299-2301	2301-2303	2303-2305	2305-2307	2307-2309	2309-2311	2311-2313	2313-2315	2315-2317	2317-2319	2319-2321	2321-2323	2323-2325	2325-2327	2327-2329	2329-2331	2331-2333	2333-2335	2335-2337	2337-2339	2339-2341	2341-2343	2343-2345	2345-2347	2347-2349	2349-2351	2351-2353	2353-2355	2355-2357	2357-2359	2359-2361	2361-2363	2363-2365	2365-2367	2367-2369	2369-2371	2371-2373	2373-2375	2375-2377	2377-2379	2379-2381	2381-2383	2383-2385	2385-2387	2387-2389	2389-2391	2391-2393	2393-2395	2395-2397	2397-2399	2399-2401	2401-2403	2403-2405	2405-2407	2407-2409	2409-2411	2411-2413	2413-2415	2415-2417	2417-2419	2419-2421	2421-2423	2423-2425	2425-2427	2427-2429	2429-2431	2431-2433	2433-2435	2435-2437	2437-2439	2439-2441	2441-2443	2443-2445	2445-2447	2447-2449	2449-2451	2451-2453	2453-2455	2455-2457	2457-2459	2459-2461	2461-2463	2463-2465	2465-2467	2467-2469	2469-2471	2471-2473	2473-2475	2475-2477	2477-2479	2479-2481	2481-2483	2483-2485	2485-2487	2487-2489	2489-2491	2491-2493	2493-2495	2495-2497	2497-2499	2499-2501	2501-2503	2503-2505	2505-2507	2507-2509	2509-2511	2511-2513	2513-2515	2515-2517	2517-2519	2519-2521	2521-2523	2523-2525	2525-2527	2527-2529	2529-2531	2531-2533	2533-2535	2535-2537	2537-25
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Totals	1,207.4	95.4	72.8	11.3	9.1	5.5	0.1	0.0	9.5	1,411.1
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INDIVIDUAL MODIFICATION												Date	February 1998																																																																																				
<b>MODIFICATION TITLE:</b> Howitzer Improvement Program 1-81-05-1002																																																																																																	
<b>MODELS OF SYSTEMS AFFECTED:</b> Howitzer, MED Sp Ft 155mm M109 Ser (Mod) (MYP)																																																																																																	
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The M109A6 Paladin, approved for full scale production, has been designed to upgrade the M109A2/A3 Howitzer's responsiveness, effectiveness, survivability; and Reliability, Availability, and Maintainability-Durability (RAM-D). This meets the user's urgent need for a product improved system that satisfies the deficiencies cited in these areas by the Mission Element Need Statement (MENS), approved by the Secretary of Defense in December 1980. The production phase of the program involves a combined effort between Letterkenny Army Depot and the contractor. M109A2/A3 Howitzers from CONUS and OCONUS field units are being shipped to Letterkenny Army Depot. Letterkenny removes traverse mechanism, disassembles the howitzer, reconditions turret components to be reset in the new turret, and overhauls/ modifies the chassis to the Paladin configuration. The reconditioned turret components, and the overhauled/modified chassis with the new M284 Cannon and M182 Gun Mount manufactured by Watervliet and Rock Island Arsenal, respectively, are shipped to the contractor for final integration and assembly, and acceptance testing. The acquisition strategy for FY89/90-FY92 called for sole source contracts. An FY93-FY96 competitive multiyear production contract was awarded to UDLP in April 1993. In April 1997, a contract modification was awarded to the existing multiyear production contract for an additional 37 M109A6 Paladins. An FY98 contract option for 36 vehicles was awarded in November 1997.</p>																																																																																																	
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <p>The M109A6 was approved for entry into full scale development in November 1984. At that time, DA decided to modify M109A2/A3 Howitzers to a HIP configuration. It was decided to merge the Howitzer Extended Life Program (HELP) into the HIP where kits from both programs would be applied to the M109A2/A3 Howitzer. The improved 155mm Self-Propelled Howitzer was approved for Type-Classification Low Rate Production (TC-LRP) and designated the M109A6 Howitzer following a Milestone III-A ASARC on 7 February 1990. In March 1993 a Milestone III Pre-ASARC review was chaired by the Assistant Secretary of the Army for Research, Development and Acquisition, and the M109A6 Paladin was approved for Type Classification-Standard and full rate production and deployment. This Milestone III is documented in Acquisition Decision Memorandum dated 9 April 1993. The Paladin production program is within schedule and, as of February 1998, successfully fielded 487 M109A6 Howitzers and all associated items of equipment. All major development milestones for the M109A6 Paladin Howitzer have been successfully completed.</p>																																																																																																	
<b>Installation Schedule:</b> <table border="1"> <thead> <tr> <th>Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</td> <td>54</td><td>54</td><td>54</td><td>54</td> <td>54</td><td>54</td><td>53</td><td>18</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>Outputs</td> <td>49</td><td>54</td><td>55</td><td>55</td> <td>54</td><td>54</td><td>54</td><td>54</td> <td>41</td><td>18</td><td>18</td><td>18</td> <td>9</td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> </tbody> </table>														Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs	54	54	54	54	54	54	53	18													Outputs	49	54	55	55	54	54	54	54	41	18	18	18	9							
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Inputs	54	54	54	54	54	54	53	18																																																																																									
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FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																	
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To																																																																																
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																	950																																																																																
<b>METHOD OF IMPLEMENTATION:</b> Depot/Contractor ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 19 Months Contract Dates: FY 1997 Apr 97 FY 1998 Nov 97 FY 1999 Delivery Date: FY 1997 Nov 98 FY 1998 Jun 99 FY 1999																																																																																																	

INDIVIDUAL MODIFICATION														Date		February 1998		
Howitzer Improvement Program 1-81-05-1002																		
MODIFICATION TITLE (Cont):																		
FINANCIAL PLAN: (\$ in Millions)																		
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
877	149.4	37	36														950	149.4
RDT&E																		
PROCUREMENT																		
Kit Quantity																		
Equipment		698.8		40.1		37.3		0.5		4.9		5.5		0.1				787.2
Equipment, Nonrecurring		233.3		4.5		4.2												242.0
Engineering Change Orders		163.5		20.7		10.5		3.3		0.4								198.4
Data		11.7		2.3		0.5												14.5
Training Equipment		14.1																14.1
Vehicular Intercom System		9.2		0.4		0.4												10.0
Other		4.4		0.7														5.1
Project Management Admin		9.2		4.7		3.0		2.8										19.7
Fielding		10.0		10.4		8.5		4.5		3.8								37.2
Depot Maint Premodification								0.2										0.2
Installation of Hardware																		
FY 1996 & Prior--Kits (877)	716	53.2	161	9.2													877	62.4
FY 1997 Eqpt -- Kits (37)			37	2.4													37	2.4
FY 1998 Eqpt -- Kits (36)					36	2.1											36	2.1
FY 1999 Eqpt -- Kits																		
FY 2000 Eqpt -- kits																		
FY 2001 Eqpt -- kits																		
FY 2002 Eqpt -- kits																		
FY 2003 Eqpt -- kits																		
TC Equip-Kits																		
Total Installment	716	53.2	198	11.6	36	2.1											950	66.9
Total Procurement Cost		1207.4		95.4		66.5		11.3		9.1		5.5		0.1				1395.3



INDIVIDUAL MODIFICATION																					
Chlorofluorocarbon (CFC) Elimination 1-96-05-1003																					
FINANCIAL PLAN: (\$ in Millions)																					
MODIFICATION TITLE (Cont):	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Kit Quantity					365														914		
Hardware						4.7												549	7.9		
Testing						0.6														12.6	
																				0.6	
Installation of Hardware																					
FY 1996 & Prior Eqpt -- Kits																					
FY 1997 Eqpt -- Kits																					
FY 1998 Eqpt -- Kits																					
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- kits																					
FY 2001 Eqpt -- kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
TC Equip-Kits																					
Total Installation						1.0		257		108								549	1.6	549	1.6
Total Procurement Cost						6.3												549	1.6	914	2.6
																			9.5		15.8

Exhibit P-40, Budget Item Justification Sheet										February 1998		
Appropriation / Budget Activity/Serial No:										Date:		
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles										P-1 Item Nomenclature:		
Program Elements for Code B Items:										FAASV PIP TO FLEET (GA8010)		
Code: A										Other Related Program Elements:		
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	56.7	9.9	6.4	23.5	1.9	3.2	0.1	0.0	18.7	0.0	4.6	124.9
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	56.7	9.9	6.4	23.5	1.9	3.2	0.1	0.0	18.7	0.0	4.6	124.9
Initial Spares												
Total Proc Cost	56.7	9.9	6.4	23.5	1.9	3.2	0.1	0.0	18.7	0.0	4.6	124.9
Flyaway U/C												
Wpn Sys Proc U/C												

**DESCRIPTION:** Funds the procurement of approved modifications to the M992 and M992A1 Field Artillery Ammunition Support Vehicle (See detailed Description/Justification on the following exhibit P-3A).

[illegible]

INDIVIDUAL MODIFICATION															Date	February 1998								
<b>MODIFICATION TITLE: FAASV Materiel Change (A2 Conversion) 1-93-05-4457</b>																								
<b>MODELS OF SYSTEMS AFFECTED: FAASV M992A2</b>																								
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The FAASV materiel change encompasses the previously approved FAASV HELP (Howitzer Extended Life Program) and Survivability Materiel Changes. The materiel change incorporates M109 Family of Vehicles improvements into the FAASV in order to maintain a common chassis. These improvements include the Low Heat Rejection/Cold Start Engine, improved XTG 411-4 Transmission, Reliability, and Maintainability (RAM) improvements to the cooling, electrical, and suspension systems, relocated heater and hydraulic reservoir, stronger fuel cell, and modifications to provide interoperability with the M109A6 Paladin Howitzer. The enhancements provided by the materiel change will permit the FAASV crew to operate in the same environment as the M109A6 Paladin. This means the operation and maintenance features will be common (i.e. spares, repair parts, special tools, and training) and the FAASV cold starting and RAM features will be comparable. The modifications to the rear door conveyor and propellant racks will improve M109A6 supportability. Funding against Depot Maintenance Pre-Modification pays the Inspect and Repair Only As Necessary (IROAN) upgrade effort. FY99 represents the first year these funds were transferred from the Operation and Maintenance, Army(OMA) to the procurement appropriation as directed by Program Budget Decision (PBD) 21.</p>																								
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> Preliminary Design Review: 1QFY91 Critical Design Review: 4QFY91 Contractor Test and Evaluation: 2QFY93 IPR Production Design: 3QFY93 TDP Available: 3QFY93 M992A2 First Delivery: 3QFY94 M992A2 First Unit Equipped: 1QFY95																								
<b>Installation Schedule:</b>																								
<b>Inputs</b>  <b>Outputs</b>	Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001						
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
	356	33	31	90	21	42	39	63	106	8	35	26	2											
321	33	32	29	25	51	49	76	110																
<b>Inputs</b> <b>Outputs</b>																					Totals			
	FY 2002				FY 2003				FY 2004				FY 2005				To Complete							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	789	789						
<b>METHOD OF IMPLEMENTATION:</b> Field Retrofit																					<b>ADMINISTRATIVE LEADTIME:</b> 12 Months		<b>PRODUCTION LEADTIME:</b> 7 Months	
<b>Contract Dates:</b> FY 1997 October 1997																					<b>FY 1998</b> N/A		<b>FY 1999</b> N/A	
<b>Delivery Date:</b> FY 1997 April 1998																					<b>FY 1998</b> N/A		<b>FY 1999</b> N/A	

INDIVIDUAL MODIFICATION													
FAASV Materiel Change (A2 Conversion) 1-93-05-4457													
MODIFICATION TITLE (Cont):													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E													
PROCUREMENT													
Kit Quantity	664	42.4	125	2.3									789
Installation Kits													
Engineering Change Orders		10.2		0.1									44.7
Project Management Admin		1.0		0.2									10.3
Testing		0.1											1.2
Vehicular Intercom System				9.1									0.1
Fielding		3.4		0.9		0.1	0.2		0.1				9.1
Depot Maint PreModification							2.7						4.7
Auxiliary Power Unit										0.6			3.3
										18.1			18.1
Installation of Hardware													
FY 1996 & Prior Eqpt( 664) Kits	462	15.4	202	8.4									664
FY 1997 Eqpt (125) Kits			125	1.5									125
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installation	462	15.4	327	9.9									789
Total Procurement Cost		72.5		22.5		0.1	2.9		0.1			18.7	116.8



INDIVIDUAL MODIFICATION												Date	February 1998																																																																																																																																																																																											
<b>MODIFICATION TITLE: FAASV Halon Replacement 1-94-05-4477</b>																																																																																																																																																																																																								
<b>MODELS OF SYSTEMS AFFECTED: FAASV M992A2</b>																																																																																																																																																																																																								
<b>DESCRIPTION / JUSTIFICATION:</b> References: DOD Directive 6050.0; DA Policy Letter 200.0.1; AMC Regulation 70-68; Montreal Protocol of 1986 and Presidential Directive . These references mandate the replacement of Halon charged fire suppression systems to prevent ozone depletion. A common replacement agent engine compartment fire extinguishing system is required for 885 FAASV systems. FY97-99 funds have been appropriated to begin step one of the conversion by replacing the fire suppression distribution system in the FAASV engine compartment on 688 vehicles with one suitable to both Halon and the selected alternate agent.																																																																																																																																																																																																								
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <b>PLANNED:</b>            Preliminary Design Review: 2QFY98            Critical Design Review: 2QFY98            Joint Government Contractor Test and Evaluation: 2QFY98            IPR Production Decision: 3QFY98            TDP Available: 3QFY98         </div> <div style="width: 45%;"> <b>ACTUAL:</b>            1QFY98              1QFY98         </div> </div>																																																																																																																																																																																																								
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<b>METHOD OF IMPLEMENTATION:</b> Unknown																																																																																																																																																																																																								
<b>Contract Dates:</b> FY 1997 July 98      FY 1998 July 98      FY 1999 N/A																																																																																																																																																																																																								
<b>Delivery Date:</b> FY 1997 Dec 88      FY 1998 Dec 98      FY 1999 N/A																																																																																																																																																																																																								
<b>ADMINISTRATIVE LEADTIME:</b> 9 Months <b>PRODUCTION LEADTIME:</b> 6 Months																																																																																																																																																																																																								



Exhibit P-40, Budget Item Justification Sheet												Date: February 1998
Appropriation / Budget Activity/Serial No:				P-1 Item Nomenclature:				IMPROVED RECOVERY VEHICLE (M88 MOD) (GA0570)				
PROCUREMENT OF WPNS & TRKD CMBT VEHs / 1 / Tracked Combat Vehicles				Other Related Program Elements:								
Program Elements for Code B Items:				Code:	A							
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty	13	15	24	24	10	15	25	25	34	45	399	629
Gross Cost	31.2	33.9	54.4	55.5	31.9	38.2	57.4	58.2	77.8	101.8	1029.3	1569.4
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	31.2	33.9	54.4	55.5	31.9	38.2	57.4	58.2	77.8	101.8	1029.3	1569.4
Initial Spares		2.9	1.6	2.0	0.8	2.9	3.2	3.1	4.2	4.2	63.2	88.0
Total Proc Cost	31.2	36.8	56.0	57.5	32.7	41.1	60.5	61.3	82.0	105.9	1092.4	1657.5
Flyaway U/C												
Wpn Sys Proc U/C	2.4	2.3	2.3	2.3	3.2	2.5	2.3	2.3	2.3	2.3	2.6	2.5
DESCRIPTION: The M88A2 HERCULES is an armored, full-tracked, diesel-powered, recovery vehicle configured with an A-frame boom, three winches, and a spade. The boom has a 35 ton lift capacity and the main winch has a constant pull capacity of 70 tons. The hull is armored for protection against small arms fire, artillery fragments and anti-personnel mines. The vehicle mounts a caliber .50 machine gun for self-protection. The M88A2 HERCULES is capable of performing recovery, evacuation, and limited repair of the main battle tank. The FY98 procurement is the first year of full rate production following a Milestone III decision in August 1997. The procurement objective for the HERCULES is 629 vehicles.												
JUSTIFICATION: The present 56 ton M88A1 is deficient in its ability to safely perform battlefield recovery of vehicles weighing 60 tons or more. The M88A1 cannot safely recover the Army's current main battle tank, the Abrams Tank, without using a second vehicle as a brake vehicle. The present lack of recovery capability has necessitated the development of a heavy recovery vehicle to provide a towing capability for vehicles weighing up to 70 tons. Future Army vehicles exceeding the M88A1's capability include the Grizzly, Wolverine, and Crusader. The M88A2 HERCULES will provide the Army this capability. The M88A2 program strategy is to modify the existing M88 recovery vehicle chassis, upgrade the propulsion system to 1050 horsepower, add armor protection, improve winching to 70 tons, improve hoisting to 35 tons, and add a hydraulic assisted braking system.												

**DESCRIPTION:** The M88A2 HERCULES is an armored, full-tracked, diesel-powered, recovery vehicle configured with an A-frame boom, three winches, and a spade. The boom has a 35 ton lift capacity and the main winch has a constant pull capacity of 70 tons. The hull is armored for protection against small arms fire, artillery fragments and anti-personnel mines. The vehicle mounts a caliber .50 machine gun for self-protection. The M88A2 HERCULES is capable of performing recovery, evacuation, and limited repair of the main battle tank. The FY98 procurement is the first year of full rate production following a Milestone III decision in August 1997. The procurement objective for the HERCULES is 629 vehicles.

**JUSTIFICATION:** The present 56 ton M88A1 is deficient in its ability to safely perform battlefield recovery of vehicles weighing 60 tons or more. The M88A1 cannot safely recover the Army's current main battle tank, the Abrams Tank, without using a second vehicle as a brake vehicle. The present lack of recovery capability has necessitated the development of a heavy recovery vehicle to provide a towing capability for vehicles weighing up to 70 tons. Future Army vehicles exceeding the M88A1's capability include the Grizzly, Wolverine, and Crusader. The M88A2 HERCULES will provide the Army this capability. The M88A2 program strategy is to modify the existing M88 recovery vehicle chassis, upgrade the propulsion system to 1050 horsepower, add armor protection, improve winching to 70 tons, improve hoisting to 35 tons, and add a hydraulic assisted braking system.

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles				P-1 Line Item Nomenclature: IMPROVED RECOVERY VEHICLE (M88 MOD) (GA0570)				Weapon System Type:		Date: February 1998	
WTCV Cost Elements			FY 96		FY 97		FY 98		FY 99					
ID	CD		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
1. Vehicle Manufacturing - Contractor	A		45841	24	1910	44421	24	1851	19153	10	1915	28395	15	1893
2. Vehicle Manufacturing - GFE			2193	*24	VAR	2390	*24	VAR	972	*10	VAR	1471	*15	VAR
3. Contractor Engineering			1349			3152			3205			3159		
4. Engineering Change Orders			125			318			604			893		
5. Project Management - Core			870			974			1006			1014		
6. Project Management - OGA			1116			1017			1118			1128		
7. Transportation			48			48			23			36		
8. Fielding			873			580			1192			1052		
9. Testing			1890			959			649					
10. Test Vehicle Refurb			58			1670								
11. Depot Maintenance - Premodification												1027		
12. Congressional Increase (ECP)									4000					
TOTAL			54363			55529			31922			38175		

Exhibit P-5a, Budget Procurement History and Planning																			
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles					Weapon System Type:			P-1 Line Item Nomenclature: IMPROVED RECOVERY VEHICLE (M88 MOD) (GA0570)											
WBS Cost Elements: Fiscal Years					Contractor and Location		Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Recv Avail	RFP Issue Date				
1. Vehicle Manufacturing - Contractor FY 96 FY 97 FY 98 FY 99					UDLP (1) UDLP UDLP UDLP		SS-FFP SS-FFP SS-FFP SS-FFP	TACOM TACOM TACOM TACOM	Apr-96 Apr-97 Apr-98 Apr-99	Jul-97 Jul-98 Jul-99 Nov-00	24 24 10 15	1910 1851 1915 1893	YES YES YES YES		Nov-95 Nov-96 Nov-97 Nov-98				
					2. Vehicle Manufacturing - GFE FY 96 FY 97 FY 98 FY 99					Various Various Various Various		Reqn/PO Reqn/PO Reqn/PO Reqn/PO	Various Various Various Various		24 24 10 15	VAR VAR VAR VAR	YES YES YES YES		
REMARKS: (1) UDLP - United Defense Limited Partnership																			













Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
PROCUREMENT OF WPHS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles												
P-1 Item Nomenclature:												HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (G323250)
Program Elements for Code B Items:												
Other Related Program Elements:												
Code: B												84649
Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty		2	6	7	9	13	18	22	23	365	465	
Gross Cost	0.0	14.6	51.4	41.3	50.4	68.6	86.5	106.5	116.5	2112.0	2647.8	
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	14.6	51.4	41.3	50.4	68.6	86.5	106.5	116.5	2112.0	2647.8	
Initial Spares				0.9	0.9	1.4	1.4	1.8	2.1	36.2	44.6	
Total Proc Cost	0.0	14.6	51.4	42.2	51.3	70.0	87.9	108.3	118.6	2148.2	2692.4	
Flyaway U/C												
Wphn Sys Proc U/C		7.3	8.6	5.9	5.6	5.3	4.8	4.8	5.1	5.8	5.7	

**DESCRIPTION:** The Wolverine (Heavy Assault Bridge) is a 26 meter (79 feet) Military Load Class 70 bridge transported on a modified M1A2 System Enhancement Package (SEP) Abrams Tank chassis. The bridge is capable of spanning gaps up to 24 meters on both prepared and unprepared abutments and can be placed on a bearing surface over its entire length. It is launched under armor within five minutes and can be retrieved, from either end, in less than ten minutes. The Wolverine is operated by a crew of two soldiers and will be employed by Combat Engineer units in both offensive and defensive combined arms operations. Its mission is to provide gap crossing capability for heavy maneuver forces. It is planned to support the Abrams Tank System and the Bradley Fighting Vehicle and is compatible with these systems in mobility and survivability.

**JUSTIFICATION:** During Operation Desert Storm, it became evident that the current Army bridging system was deficient in gap spanning capability and required increased load carrying capability. The Wolverine will replace the Armored Vehicle Launched Bridge (AVLB) providing increased worldwide gap crossing capabilities, increased load capacity to support Military Load Class 70 vehicles and improved mobility, survivability, and logistics compatibility. The Wolverine enhances the Combined Arms Team's ability to move where it wants, multiplying its combat capabilities. First Unit Equipped will be in FY00 at a quantity of 12 vehicles.

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			P-1 Line Item Nomenclature: HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)			Weapon System Type:			Date: February 1998		
WTCV			FY 96			FY 97			FY 98			FY 99		
Cost Elements			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
1. Vehicle Manufacturing - Contractor	B		10048	2	5024	32618	6	5436	27376	7	3911	35261	9	3918
2. Vehicle Manufacturing - ANAD						1212	6	202	1600	7	229	2100	9	233
3. Vehicle Manufacturing - GFE			1861						2260	7	323	2940	9	327
4. Contract Engineering			1330			15513			7000			6990		
5. Engineering Change Orders									730			950		
6. Project Mgmt Admin - Core			482			844			730			750		
7. Project Mgmt Admin - OGA			890			1204			1260			1160		
8. New Equipment Training									340			230		
9. Total Package Fielding														
10. Transportation						10			15			20		
TOTAL			14611			51401			41311			50401		

Exhibit P-5a, Budget Procurement History and Planning												
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles					Weapon System Type:		P-1 Line Item Nomenclature: HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)					
WBS Cost Elements: Fiscal Years		Contractor and Location		Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
1. Vehicle Manufacturing - Contractor		General Dynamics Land Sys Lima, Ohio		SS-CPFF	TACOM	Aug-96		2	5024	YES		
FY 96				SS-CPFF	TACOM	Dec-96		4	*6199	YES		
FY 97				SS-FFP	TACOM	Jan-98		2	*3911	YES		Aug-97
FY 98				M2(1)	TACOM	Jan-98		7	3911	YES		Aug-97
FY 99				M2(1)	TACOM	Nov-98		9	3918	YES		Jul-98
2. Vehicle Manufacturing - ANAD		Anniston Army Depot		SS-FFP	TACOM			**6	202			
FY 97								7	229			
FY 98								9	233			
FY 99												
3. Vehicle Manufacturing - GFE		Government Furnished Equipment										
FY 96								7	323			
FY 97								9	327			
FY 98												
FY 99												
REMARKS: *The first four vehicles of the FY97 funds were purchased as an option in Dec 96 on the Aug 96 Pilot Vehicle contract. The unit price is much greater due to the nonrecurring costs to be incurred in preparing for production such as tooling costs. The last 2 vehicles will be included in the Jan 98 MYP award at the same unit price as the FY98 buy. **PM Abrams provided PM Wolverine with two refurbished chassis for the first two LRIP vehicles.												







FY 98 / 99 BUDGET PRODUCTION SCHEDULE										P-1 Item Nomenclature: HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)										Date: February 1998									
COST ELEMENTS										Fiscal Year 00										Fiscal Year 01									
										Calendar Year 00										Calendar Year 01									







Exhibit P-40, Budget Item Justification Sheet											Date:	
Appropriation / Budget Activity/Serial No:											February 1998	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles											P-1 Item Nomenclature:	
Program Elements for Code B Items:											ARMORED VEH LAUNCH BRIDGE (AVLB) (MOD) (GZ3000)	
Other Related Program Elements:												
Code: A												
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	146.2	0.0	0.0	0.0	0.0	1.0	1.3	1.7	0.0	0.0	0.0	150.3
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	146.2	0.0	0.0	0.0	0.0	1.0	1.3	1.7	0.0	0.0	0.0	150.3
Initial Spares												
Total Proc Cost	146.2	0.0	0.0	0.0	0.0	1.0	1.3	1.7	0.0	0.0	0.0	150.3
Flyaway U/C												
Wpn Sys Proc U/C												

**DESCRIPTION:** The Armored Vehicle Launched Bridge (AVLB) is the current authorized standard assault bridge supporting heavy forces. AVLBs are primarily assigned to Combat Engineering training and War Reserve sites.

**JUSTIFICATION:** In order to fully modify the fleet, 35 vehicles, 20% of the Active Component and high priority War Reserve units need modifications. The Armored Top Loading Air Cleaner and Air Induction System Improvements (Clean Air) will improve the reliability and extend engine life. The other two modifications, the AN/VVS-2 Driver's Night Viewer (DNV) and Smoke Grenade Launcher will improve the tactical maneuvering and operations capability of the AVLB. The DNV will improve the night vision capability of the vehicle driver; the Smoke Grenade Launcher allows the AVLB to advance, deploy, and retreat under cover of obscuring smoke in a tactical environment. These vehicle modifications are required on AVLBs to make the vehicles supportable.





INDIVIDUAL MODIFICATION																			February 1998	
MODIFICATION TITLE (Cont):																			Date	
AVLB Block MOD 1-97-05-4531																				
FINANCIAL PLAN: (\$ in Millions)																				
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:		P-1 Item Nomenclature:										M1 ABRAMS TANK (MOD) (GA0700)	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles		Other Related Program Elements:											
Program Elements for Code B Items:		Code:	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog		
Proc Qty	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Gross Cost	447.6	35.0	50.1	62.9	29.2	53.3	30.4	62.5	97.1	119.9	1348.9	2336.9	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	447.6	35.0	50.1	62.9	29.2	53.3	30.4	62.5	97.1	119.9	1348.9	2336.9	
Initial Spares													
Total Proc Cost	447.6	35.0	50.1	62.9	29.2	53.3	30.4	62.5	97.1	119.9	1348.9	2336.9	
Flyaway U/C													
Wpn Sys Proc U/C													

**DESCRIPTION:** This budget line provides for the procurement and installation of modification kits for the Abrams series tank to improve Lethality, Survivability, Safety and Operational Capabilities. Tank Lethality is being improved by the Armament Enhancement Initiative (AEI) and the Embedded Battle Command (EBC). Tank Survivability and Safety improvements include Live Fire Category A (Manual Blaster, Driver's / Loader's Hatch Ballistic Rims, Turret Cable Ballistic Protection and Driver's Hatch Latch); Live Fire Category B (Ammo Door Latch Mechanism, Smoke Generator Fuel Line, NBC Fire Warning System (NBCFW), new Hand - Held Fire Extinguishers (H-HFE), Improved Gunner's Station (IGS); Battlefield Override (BF/OR), Driver's Viewer Quick Release (DVQR); System Enhancement Package (SEP); and Driver's Hatch Interlock (DHI). Tank Operational Improvements include the Precision Lightweight GPS Receiver (PLGR); Pulse - Jet System (PJS); Vehicle Intercommunications System (VIS); External Auxiliary Power Unit (EAPU); M1A2 Field Upgrades, the M1A1-D program and the Mounted Water Ration Heater (MWRH). Finally, there is the Presidentially directed HALON Replacement program (Ozone Depleting Chemical Replacement). These P-Forms also reflect the alignment of most MODS into BLOCKS in order to realize reduced installation costs from concurrent application.

**JUSTIFICATION:** The priorities noted here in are consistent with USA Armor School requirements and are structured to meet needs validated by Tank users in training and testing as well as in actions such as Operation Desert Storm (ODS). Degradation of tank warfighting capability and survivability, increased incidents of vehicle damage and crew injuries will occur if these modifications are delayed or deleted.

Exhibit P-40M Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No.			Date									
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			February-98									
Program Elements for Code B Items			M1 ABRAMS TANK (MOD) (GA0700)									
			P-1 Item Nomenclature									
			Other Related Program Elements									
			Code									
			Fiscal Years									
OSIP NO.	Classification		FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	Total
Halon Replacement (HAR) [MOD 1]												
1-92-05-4411	Environmental		7.4	1.5	2.0	5.3	6.5	6.6	6.8	5.7	5.6	47.4
Driver's Hatch Interlock (DHI) [Mod 2]												
1-97-05-4520	Safety		0.0	20.4	6.5	5.8	4.9	0.0	0.0	0.0	39.8	77.4
Vehicle Intercommunications System (VIS) [MOD 3]												
1-92-05-4412	Legislative Compl.		27.0	6.6	6.0	5.3	0.7	0.0	0.0	0.0	4.5	50.1
Armament Enhancement Initiative (AEI) [MOD 4]												
1-89-05-4226	Operational		60.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.5
Precision Lightweight GPS Receiver (PLGR) [MOD 5]												
1-92-05-4417	Manprint		0.4	0.0	0.5	0.6	0.6	0.6	0.6	0.6	13.4	17.3
Live Fire Category A (LFCA) [MOD 6]												
1-89-05-4230	Deficiency Correct.		14.5	5.3	3.5	3.5	3.5	3.3	2.9	2.5	0.3	39.3
Battlefield Override (BF/OR) [MOD 7]												
1-89-05-4229	Operational		13.7	2.7	2.1	4.2	1.1	0.8	0.6	0.3	0.0	25.5
Live Fire Category B (LFCB) [MOD 8]												
1-94-05-4481	Deficiency Correct.		2.4	1.8	0.8	0.8	0.8	0.7	0.7	0.6	0.0	8.6
Driver's Viewer Quick Release (DVQR) [MOD 9]												
1-92-05-4427	Safety		0.3	0.2	0.3	0.3	0.2	0.0	0.0	0.0	0.0	1.3
Pulse - Jet System (PJS) [MOD 10]												
1-92-05-4475	Operational		29.0	6.7	3.5	2.4	1.5	0.0	0.0	0.0	296.9	340.0
Mounted Water Ration Heater (MWRH) [MOD 11]												
1-92-05-4426	Manprint		1.9	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.1
System Enhancement Package (SEP) [MOD 12]												
1-96-05-4505	Operational		0.0	0.0	0.0	0.0	2.9	46.5	82.8	107.4	655.5	895.1



Exhibit P-40M Budget Item Justification Sheet									
Appropriation / Budget Activity/Serial No.				Date		February-98			
PROCUREMENT OF WPNS & TRKD CMBT VEHs / 1 / Tracked Combat Vehicles				P-1 Item Nomenclature		M1 ABRAMS TANK (MOD) (GA0700)			
Program Elements for Code B Items		Code		Other Related Program Elements					
Embedded Battle Command (EBC) [MOD 13]									
1-96-05-4516	Operational	0.0	0.0	0.0	0.0	1.0	1.0	1.1	9.6
External Auxiliary Pwr Unit (EAPU) [MOD 14]									
1-85-05-4057	Operational	0.0	8.0	2.0	0.0	0.0	0.0	0.0	50.8
External Auxiliary Pwr Unit Upgrade (EAPUU) [MOD 15]									
1-97-05-4521	Operational	0.0	2.4	0.0	0.0	0.0	0.0	0.0	2.4
NBC Fire Warning (NBCFW) [MOD 16]									
1-97-05-4524	Safety	0.0	0.0	0.0	4.1	3.3	0.4	0.0	13.1
Hand-Held Fire Extinguisher (HHFE) [MOD 17]									
1-97-05-4525	Safety	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.8
M1A2 Field Mods (A2FM) [MOD 18]									
1-97-05-4534	Deficiency Correction	0.0	1.4	0.9	0.2	1.0	2.0	1.0	13.7
Matrix Support (MXSP) [MOD 19]									
OSIP NO 20	Operational	0.0	0.5	0.5	0.5	0.6	0.6	0.6	7.3
Prior Year Mod Installation (PYMI) [MOD 20]									
OSIP NO 21	Operational	65.0	4.9	0.5	0.0	0.0	0.0	0.0	70.4
M1A1-D Integration Kit [MOD 21]									
OSIP NO. 22	Operational	0.0	0.0	0.0	20.3	0.0	0.0	0.0	291.7
Totals		221.7	62.9	29.2	53.3	30.4	62.5	97.1	2,025.4





INDIVIDUAL MODIFICATION												Date	February 1998																																																																																																																																		
MODIFICATION TITLE: Driver's Hatch Interlock (DHI) [Mod 2] 1-97-05-4520																																																																																																																																															
MODELS OF SYSTEMS AFFECTED: M1 = 0, IPM1 = 818, M1A1 = 4327, M1A2 = 435 TOTAL RQMT = 5580																																																																																																																																															
DESCRIPTION / JUSTIFICATION:																																																																																																																																															
<p>The Driver's Hatch Interlock (DHI) is a SAFETY modification which provides an electronic interface between the Driver's Hatch and the Turret Drive (Rotation) controls. Its purpose is to preclude turret rotation while the driver's hatch is open. In the recent past there have been several accidents in the field where the driver has been injured or killed by inadvertently extending his head outside the hatch while the turret was being rotated. The DHI will assure that similar accidents will not occur in the future. Without this funding, the potential exists for additional driver accidents and / or fatalities.</p> <p>April 97 contract award shown below is M1A2 only.</p> <p>January 98 contract award shown below is M1A1 only.</p>																																																																																																																																															
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																																																																																																																																															
<table border="1"> <thead> <tr> <th colspan="10">PLANNED</th> <th colspan="4">ACCOMPLISHED</th> </tr> <tr> <th colspan="10"></th> <th>1Q93</th> <th colspan="3"></th> </tr> </thead> <tbody> <tr> <td colspan="10">Preliminary Design Review</td> <td>-</td> <td>-</td> <td>-</td> <td>2Q96</td> <td colspan="3"></td> </tr> <tr> <td colspan="10">Critical Design Review</td> <td>-</td> <td>-</td> <td>-</td> <td>3Q96</td> <td colspan="3"></td> </tr> <tr> <td colspan="10">Development Test &amp; Eval.</td> <td>-</td> <td>-</td> <td>-</td> <td>4Q96</td> <td colspan="3"></td> </tr> <tr> <td colspan="10">IPR Production Decision</td> <td>-</td> <td>-</td> <td>-</td> <td>4Q97</td> <td colspan="3"></td> </tr> <tr> <td colspan="10">ECP Completed</td> <td>-</td> <td>-</td> <td>-</td> <td>1Q98</td> <td colspan="3"></td> </tr> <tr> <td colspan="10">Tech. Data Package Available</td> <td>-</td> <td>-</td> <td>-</td> <td>1Q98</td> <td colspan="3"></td> </tr> </tbody> </table>										PLANNED										ACCOMPLISHED														1Q93				Preliminary Design Review										-	-	-	2Q96				Critical Design Review										-	-	-	3Q96				Development Test & Eval.										-	-	-	4Q96				IPR Production Decision										-	-	-	4Q97				ECP Completed										-	-	-	1Q98				Tech. Data Package Available										-	-	-	1Q98							
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Tech. Data Package Available										-	-	-	1Q98																																																																																																																																		
Installation Schedule:																																																																																																																																															
<table border="1"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>Inputs</td> <td>375</td> <td>400</td> <td>400</td> <td>400</td> <td>400</td> <td>400</td> <td>400</td> <td>150</td> <td>145</td> <td>140</td> <td>135</td> <td>135</td> <td>135</td> <td>135</td> <td>135</td> <td>131</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Outputs</td> <td>180</td> <td>242</td> <td>266</td> <td>267</td> <td>267</td> <td>267</td> <td>267</td> <td>267</td> <td>106</td> <td>107</td> <td>107</td> <td>107</td> <td>292</td> <td>291</td> <td>291</td> <td>291</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>														Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs	375	400	400	400	400	400	400	150	145	140	135	135	135	135	135	131					Outputs	180	242	266	267	267	267	267	267	106	107	107	107	292	291	291	291																														
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																																														
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Inputs	375	400	400	400	400	400	400	150	145	140	135	135	135	135	135	131																																																																																																																															
Outputs	180	242	266	267	267	267	267	267	106	107	107	107	292	291	291	291																																																																																																																															
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Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																																														
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To																																																																																																																													
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METHOD OF IMPLEMENTATION: Contractor Install ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 4 Months																																																																																																																																															
Contract Dates: FY 1997 APR 97 FY 1998 JAN 98 FY 1999 FEB 99																																																																																																																																															
Delivery Date: FY 1997 AUG 97 FY 1998 MAY 98 FY 1999 JUN 99																																																																																																																																															

INDIVIDUAL MODIFICATION																		
Driver's Hatch Interlock (DHI) [Mod 2] 1-97-05-4520																		
Date February 1998																		
MODIFICATION TITLE (Cont):																		
FINANCIAL PLAN: (\$ in Millions)																		
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																		
PROCUREMENT																		
Kit Quantity	2433		228		420										2499		5580	
Installation Kits																		
Installation Kits, Nonrecurring																		
Equipment		18.5		2.1		4.0												51.9
Equipment, Nonrecurring																		
Engineering Change Orders		1.1																1.1
Data																		
Training Equipment																		
Support Equipment																		
Other (Tst & Source select)																		
Interim Contractor Support																		
Installation of Hardware																		
FY 1996 & Prior Eqpt -- Kits																		
FY 1997 Eqpt -- Kits	422	0.8	1067	4.4	427	1.8			517	2.2					2499		2433	9.2
FY 1998 Eqpt -- Kits									228	0.9							228	0.9
FY 1999 Eqpt -- Kits									420	1.8							420	1.8
FY 2000 Eqpt -- kits																		
FY 2001 Eqpt -- kits																		
FY 2002 Eqpt -- kits																		
FY 2003 Eqpt -- kits																		
TC Equip 2499 --Kits																		
4																		
Total Procurement Cost	422	0.8	1067	4.4	427	1.8		4.9	1165	4.9					2499	12.5	2499	12.5
															2499	12.5	5580	24.4
		20.4		6.5		5.8		4.9								39.8		77.4

<b>INDIVIDUAL MODIFICATION</b>										Date	February 1998																																																																																																								
<b>MODIFICATION TITLE:</b> Vehicle Intercommunications System (VIS) [MOD 3] 1-92-05-4412																																																																																																																			
<b>MODELS OF SYSTEMS AFFECTED:</b> M1 = 0, IPM1 = 0, M1A1 = 4327, M1A2 = 181 TOTAL RQMT = 4508																																																																																																																			
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The Vehicle Intercommunications System (VIS) is an intercom for inter-crew communications and a connection to a radio for tank to tank direct communications. VIS replaces the AN/VIC-1 which is technologically obsolete, difficult to maintain and susceptible to electronic countermeasures. VIS is a state-of-the-art replacement which has none of these drawbacks. This is a Congressionally mandated program. All milestones are for USA CECOM, the "A" proponent for the VIS program. Current funding will provide for the retrofit of all M1A2's produced prior to VIS availability (Balance of M1A2's will be fitted in production via the M1A2 Upgrade program) and all M1A1's.</p>																																																																																																																			
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <table style="width:100%; border: none;"> <tr> <td style="width:50%;"><u>PLANNED</u></td> <td style="width:50%;"><u>ACCOMPLISHED</u></td> </tr> <tr> <td>Development Test &amp; Eval. - - - - - 4Q92</td> <td>2Q92</td> </tr> <tr> <td>Initial Operational Test &amp; Eval. - - - - - 3Q94</td> <td>3Q94</td> </tr> <tr> <td>IPR Production Decision - - - - - 4Q94</td> <td>4Q94</td> </tr> </table>												<u>PLANNED</u>	<u>ACCOMPLISHED</u>	Development Test & Eval. - - - - - 4Q92	2Q92	Initial Operational Test & Eval. - - - - - 3Q94	3Q94	IPR Production Decision - - - - - 4Q94	4Q94																																																																																																
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IPR Production Decision - - - - - 4Q94	4Q94																																																																																																																		
<b>Installation Schedule:</b> <table border="1" style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> <tr> <td>Totals</td> <td>164</td><td>164</td><td>164</td><td>163</td> <td>128</td><td>128</td><td>128</td><td>128</td> <td>113</td><td>113</td><td>113</td><td>112</td> <td>128</td><td>128</td><td>128</td><td>128</td> <td>67</td><td></td><td></td><td></td> </tr> <tr> <td>Inputs</td> <td>1932</td><td>159</td><td>159</td><td>159</td> <td>163</td><td>164</td><td>164</td><td>164</td> <td>128</td><td>128</td><td>128</td><td>128</td> <td>128</td><td>128</td><td>128</td><td>128</td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>Outputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> </table>												Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	164	164	164	163	128	128	128	128	113	113	113	112	128	128	128	128	67				Inputs	1932	159	159	159	163	164	164	164	128	128	128	128	128	128	128	128					Outputs																				
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																															
Totals	164	164	164	163	128	128	128	128	113	113	113	112	128	128	128	128	67																																																																																																		
Inputs	1932	159	159	159	163	164	164	164	128	128	128	128	128	128	128	128																																																																																																			
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	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete																																																																																																		
Inputs																	322	4508																																																																																																	
Outputs																	322	4508																																																																																																	
<b>IMPLEMENTATION:</b> Depot / Contr. Field Teams ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 4 Months Contract Dates: FY 1997 APR 97 FY 1998 JUN 98 FY 1999 JUN 99 Delivery Date: FY 1997 SEP 97 FY 1998 OCT 98 FY 1999 OCT 99																																																																																																																			

INDIVIDUAL MODIFICATION													
Vehicle Intercommunications System (VIS) [MOD 3] 1-92-05-4412													
MODIFICATION TITLE (Cont):													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E													
PROCUREMENT													
Kit Quantity	2568		655		512		451						4508
Installation Kits													
Installation Kits, Nonrecurring													
Equipment		22.9		5.7		5.1		4.6				3.9	42.2
Equipment, Nonrecurring		0.2											0.2
Engineering Change Orders		0.2											0.2
Testing													
Training Equipment													
Support Equipment													
Other		1.7											1.7
Interim Contractor Support		0.5											0.5
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits	1932	1.5	636	0.9									2568
FY 1997 Eqpt -- Kits					655	0.9							655
FY 1998 Eqpt -- Kits							512	0.7					512
FY 1999 Eqpt -- Kits									451	0.7			451
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip -- 322 Kits													
Total Installation	1932	1.5	636	0.9	655	0.9	512	0.7	451	0.7			322
Total Procurement Cost		27.0		6.6		6.0		5.3		0.7		4.5	50.1

## Date \_\_\_\_\_

MODIFICATION TITLE: **Armament Enhancement Initiative (AEI) [MOD 4] 1-89-05-4226**

MODELS OF SYSTEMS AFFECTED: M1 = 0, IPM1 = 0, M1A1 = 4327, M1A2 = 0 TOTAL RQMT = 4327

DESCRIPTION / JUSTIFICATION:

The Armament Enhancement Initiative (AEI) is a high priority program to improve the lethality of the Abrams M1A1 tank fleet by improving the 120mm main armament ammunition and by modifying the fire control system via new ballistic solutions and reticle changes to allow the tank to accept the new rounds (All M1A2's are receiving this mod in production). The ammunition upgrades will significantly improve kill ratios in actions such as Operation Desert Storm. This program also includes the upgrade of the first 1629ea M1A1 gun mounts to the higher pressure (and higher muzzle velocity) AEI configuration (the balance of delivered gun mounts were supplied in this configuration for production). The Gun Mount upgrade is an RIA (Rock Island Arsenal) effort; Reticle revisions are contracted and field retrofits to the tanks are completed by a Depot Team.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		PLANNED	ACCOMPLISHED
Preliminary Design Review	-	-	-
Critical Design Review	-	-	-
Contractor Test & Eval.	-	-	-
Initial Operational Test & Eval.	-	-	-
TDP Available	-	-	-

### Installation Schedule:

[illegible][illegible]

METHOD OF IMPLEMENTATION: See Description		ADMINISTRATIVE LEADTIME:		PRODUCTION LEADTIME:	
		N/A	Months	N/A	Months
Contract Dates:	FY 1997	N/A	FY 1998	N/A	FY 1999
Delivery Date:	FY 1997	N/A	FY 1998	N/A	FY 1999



INDIVIDUAL MODIFICATION													
Date February 1998													
MODIFICATION TITLE (Cont):													
Armament Enhancement Initiative (AEI) [MOD 4] 1-89-05-4226													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RD&E													
PROCUREMENT													
Kit Quantity	4327												4327
Installation Kits													
Installation Kits, Nonrecurring		26.4											26.4
Equipment													
Equipment, Nonrecurring													
Engineering Change Orders		3.2											3.2
Data (In - House Support)													
Training Equipment													
Support Equipment													
Other (Gun Mount Rebuild)		15.2											15.2
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits	4177	15.3	150	0.4									4327
FY 1997 Eqpt -- Kits													
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installment	4177	15.3	150	0.4									15.7
Total Procurement Cost		60.1		0.4									60.5

INDIVIDUAL MODIFICATION																																																																																																																											
										Date	February 1998																																																																																																																
<b>MODIFICATION TITLE:</b> Precision Lightweight GPS Receiver (PLGR) [MOD 5] 1-92-05-4417																																																																																																																											
<b>MODELS OF SYSTEMS AFFECTED:</b> M1 = 0, IPM1 = 0, M1A1 = 4327, M1A2 = 0 TOTAL RQMT = 4327ea																																																																																																																											
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The Precision Lightweight GPS Receiver (PLGR) is a self-contained locator unit which can collect and process GPS satellite signals and derive Position (To within + or - 10 meters), Velocity and Time (PVT). The funding shown is for the PLGR Installation Kit only. PLGR units were procured and provided to PM Abrams by PM GPS.</p>																																																																																																																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="10" style="text-align: center;">DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</th> <th colspan="2" style="text-align: center;">PLANNED</th> <th colspan="2" style="text-align: center;">ACCOMPLISHED</th> </tr> </thead> <tbody> <tr> <td colspan="10">Preliminary Design Review</td> <td colspan="2">2Q91</td> <td colspan="2"></td> </tr> <tr> <td colspan="10">Critical Design Review</td> <td colspan="2">4Q91</td> <td colspan="2"></td> </tr> <tr> <td colspan="10">Contractor Test &amp; Eval.</td> <td colspan="2">3Q93</td> <td colspan="2"></td> </tr> <tr> <td colspan="10">Development Test &amp; Eval.</td> <td colspan="2">1Q94</td> <td colspan="2"></td> </tr> <tr> <td colspan="10">Initial Operational Test &amp; Eval.</td> <td colspan="2">4Q94</td> <td colspan="2"></td> </tr> <tr> <td colspan="10">IPR Production Decision</td> <td colspan="2">2Q95</td> <td colspan="2"></td> </tr> <tr> <td colspan="10">TDP Available</td> <td colspan="2">**</td> <td colspan="2"></td> </tr> </tbody> </table>												DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:										PLANNED		ACCOMPLISHED		Preliminary Design Review										2Q91				Critical Design Review										4Q91				Contractor Test & Eval.										3Q93				Development Test & Eval.										1Q94				Initial Operational Test & Eval.										4Q94				IPR Production Decision										2Q95				TDP Available										**			
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:										PLANNED		ACCOMPLISHED																																																																																																															
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<b>MODIFICATION TITLE:</b> Live Fire Category A (LFCA) [MOD 6] 1-89-05-4230																																																																																																																	
<b>MODELS OF SYSTEMS AFFECTED:</b> M1 = 0, IPM1 = 0, M1A1 = 4327, M1A2 = 0 <span style="float: right;">TOTAL RQMT = 4327</span>																																																																																																																	
<b>DESCRIPTION / JUSTIFICATION:</b> Live Fire Category A consists of the following M1A1 Tank modifications: [1.] Independent Manual Blaster, [2.] Driver's / Loader's Hatch Ballistic Rims, [3.] AFES Wiring Harness Ballistic Protection and [4.] Driver's Hatch Latch Mechanism. Each of these modifications corrects a deficiency relating to tank survivability found during Live - Fire Testing. These modifications are planned for concurrent procurement and installation as a portion of Block G.																																																																																																																	
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <table style="width: 100%; border: none;"> <tr> <th style="text-align: left; width: 40%;"></th> <th style="text-align: center; width: 10%;">PLANNED</th> <th style="text-align: center; width: 10%;">ACCOMPLISHED</th> </tr> <tr> <td>Preliminary Design Review</td> <td style="text-align: center;">2Q89</td> <td style="text-align: center;">2Q89</td> </tr> <tr> <td>Critical Design Review</td> <td style="text-align: center;">1Q91</td> <td style="text-align: center;">1Q91</td> </tr> <tr> <td>Contractor Test &amp; Eval.</td> <td style="text-align: center;">4Q91</td> <td style="text-align: center;">4Q91</td> </tr> <tr> <td>IPR Production Decision</td> <td style="text-align: center;">2Q92</td> <td style="text-align: center;">2Q92</td> </tr> <tr> <td>TDP Available</td> <td style="text-align: center;">4Q92</td> <td style="text-align: center;">4Q92</td> </tr> </table>											PLANNED	ACCOMPLISHED	Preliminary Design Review	2Q89	2Q89	Critical Design Review	1Q91	1Q91	Contractor Test & Eval.	4Q91	4Q91	IPR Production Decision	2Q92	2Q92	TDP Available	4Q92	4Q92																																																																																						
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<b>Method of Implementation:</b> Contr. Field Team <span style="float: right;">ADMINISTRATIVE LEADTIME: 2 Months</span> <span style="float: right;">PRODUCTION LEADTIME: 6 Months</span>																																																																																																																	
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Live Fire Category A (LFCA) [MOD 6] 1-89-05-4230																			
MODIFICATION TITLE (Cont):																			
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
RD&E																			
PROCUREMENT																			
Kit Quantity	2110	500	390		390		390		390		157					4327			
Installation Kits																			
Installation Kits, Nonrecurring																			
Equipment	9.9	2.1		1.2		1.2		1.2		0.9		0.4					16.9		
Equipment, Nonrecurring																			
Engineering Change Orders																			
Data																			
Training Equipment																			
Support Equipment																			
Other (In - House Spt)	0.1																0.1		
Interim Contractor Support																			
Installation of Hardware																			
FY 1996 & Prior Eqpt -- Kits	1400	4.5	542	3.2	168	1.0	278	1.7	278	1.7	278	1.8	278	1.8		2110	8.7		
FY 1997 Eqpt -- Kits					222	1.3	112	0.6	112	0.6	112	0.6	112	0.7		500	3.0		
FY 1998 Eqpt -- Kits																390	2.3		
FY 1999 Eqpt -- Kits																390	2.4		
FY 2000 Eqpt -- kits																390	2.4		
FY 2001 Eqpt -- kits																390	2.5		
FY 2002 Eqpt -- kits																390	2.5		
FY 2003 Eqpt -- kits																157	1.0		
TC Equip-Kits																			
Total Installment	1400	4.5	542	3.2	390	2.3	390	2.3	390	2.4	390	2.5	390	2.5	45	4327	22.3		
Total Procurement Cost		14.5		5.3		3.5		3.5		3.3		2.9		2.5			39.3		

INDIVIDUAL MODIFICATION																																																																																																																	
								Date	February 1998																																																																																																								
<b>MODIFICATION TITLE:</b> Battlefield Override (BF/OR) [MOD 7] 1-89-05-4229																																																																																																																	
<b>MODELS OF SYSTEMS AFFECTED:</b> M1 = 0, IPM1 = 0, M1A1 = 4327, M1A2 = 81 TOTAL RQMT = 4408																																																																																																																	
<b>DESCRIPTION / JUSTIFICATION:</b> <p>Battlefield Override (BF/OR) is a completely mechanical bypass of the mechanical fuel/engine/transmission controls requiring no primary or back-up electrical system for operation. The purpose of BF/OR is to allow an Abrams Tank to extricate itself from the battlefield when normal fuel flow, engine control or transmission shifting have been lost through battle damage. BF/OR is designed for use in combat situations only; has no peacetime recovery role and is based on the premise that crew/tank self recovery takes priority over potential mechanical damage resulting from uncontrolled operation. This modification will significantly increase crew/tank survivability in a combat environment.</p>																																																																																																																	
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Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																
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<b>Outputs</b>	1421	114	115	115	84	83	83	83	83	223	222	222	222	84	83	83	84	83	83	83																																																																																													
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<b>METHOD OF IMPLEMENTATION:</b> Depot Field Teams <b>ADMINISTRATIVE LEADTIME:</b> 2 Months <b>PRODUCTION LEADTIME:</b> 6 Months <b>Contract Dates:</b> FY 1997 MAY 97     FY 1998 MAY 98     FY 1999 MAY 99 <b>Delivery Date:</b> FY 1997 NOV 97     FY 1998 NOV 98     FY 1999 NOV 99																																																																																																																	



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<b>MODELS OF SYSTEMS AFFECTED:</b> M1 = 0, IPM1 = 0, M1A1 = 4327, M1A2 = 81 TOTAL RQMT = 4408																																																																																																																																																																																																											
<b>DESCRIPTION / JUSTIFICATION:</b> <p>Live Fire Category B includes the following individual modifications: [1.] Improved Gunner's Station [2.] Smoke Generator Fuel Line and [3.] Turret Ammunition Door Locking Mechanism. Each of these modifications corrects a vehicle deficiency found during Live Fire testing. These modifications are planned for concurrent procurement and application as a portion of Block G.</p>																																																																																																																																																																																																											
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Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																																																																																																										
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INDIVIDUAL MODIFICATION																			February 1998	
Live Fire Category B (LFCB) [MOD 8] 1-94-05-4481																			Date	
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
RDT&E PROCUREMENT Kit Quantity Installation Kits Installation Kits, Nonrecurring Equipment Equipment, Nonrecurring Engineering Change Orders Data Training Equipment Support Equipment Other Interim Contractor Support	2010		967		404		404		404		219						4408			
		0.8		0.4		0.2		0.2		0.2		0.1						1.9		
Installation of Hardware FY 1996 & Prior Eqpt -- Kits FY 1997 Eqpt -- Kits FY 1998 Eqpt -- Kits FY 1999 Eqpt -- Kits FY 2000 Eqpt -- kits FY 2001 Eqpt -- kits FY 2002 Eqpt -- kits FY 2003 Eqpt -- kits TC Equip-Kits	1058	1.6	952	1.4	404	0.6	404	0.6	159	0.2							2010	3.0		
									245	0.4	159	0.2					967	1.4		
											245	0.4					404	0.6		
												0.3					404	0.7		
											159	0.4					404	0.6		
											245	0.4	159	0.2			404	0.6		
													219	0.4			219	0.4		
Total Installment		1058	1.6	952	1.4	404	0.6	404	0.6	404	0.6	404	0.7	378	0.6		4408	6.7		
Total Procurement Cost			2.4		1.8		0.8		0.8		0.7		0.7		0.6			8.6		

## INDIVIDUAL MODIFICATION

Driver's Viewer Quick Release (DVQR) [MOD 9] 1-92-05-4427

MODELS OF SYSTEMS AFFECTED:

M1 = 0	IPM1 = 0	M1A1 = 4327	M1A2 = 181	TOTAL RCMT = 4508
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## DESCRIPTION / JUSTIFICATION:

The Driver's Night Viewer Quick Release (DVQR) is a modification to the Driver's Night Viewer Periscope Retainer. It Provides a more positive locking feature which will preclude inadvertent release of the periscope from its operating position. Its primary purpose is to prevent the Viewer / Periscope from falling into the driver's lap when it is moved out of the driver's way as he exits the vehicle precluding injury to the driver as well as damage to the periscope. Because of its potential importance in emergency driver egress this modification has a secondary safety designation. It is however, primarily an operational improvement.

## DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Activity	Start	End	Duration	Predecessors	Successors	Resources	Notes
Critical Design Review	10/1/2023	10/15/2023	15 days	None	Development Test & Eval.	3 Engineers	Key milestone for design validation.
Development Test & Eval.	10/15/2023	11/1/2023	17 days	Critical Design Review	IPR Production Decision	2 Engineers, 1 Tester	Focus on integration testing.
IPR Production Decision	11/1/2023	11/15/2023	15 days	Development Test & Eval.	IDP Available	2 Engineers	Final decision on production readiness.
IDP Available	11/15/2023	12/1/2023	17 days	IPR Production Decision	None	1 Engineer	Initial Distribution Plan (IDP) finalized.

## PLANNED

4Q93  
1Q94  
3Q94  
4Q94

## ACCOMPLISHED

4Q93  
1Q94  
3Q94  
4Q94

**Installation Schedule:**

Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Totals																				
Inputs	1505	227	228	228	261	261	262	262	261	261	262	262	262							
Outputs	785	180	180	180	227	228	228	228	261	261	262	262	262	261	261	262	262			

[illegible]

METHODOLOGY		ADMINISTRATIVE LEADTIME:		PRODUCTION LEADTIME:	
Method	Team	Days	Months	Days	Months
Depot	Field Teams	2	2	3	3

**Contract Dates:**

**Delivery Date:**

FY 1998 OCT 97

FY 1998 DEC 97

INDIVIDUAL MODIFICATION																				
Driver's Viewer Quick Release (DVQR) [MOD 9] 1-92-05-4427																				
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	1505		911		1046		1046												4508	
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment		0.2		0.1		0.1		0.1												0.5
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	785	0.1	720	0.1															1505	0.2
FY 1997 Eqpt -- Kits					911	0.2													911	0.2
FY 1998 Eqpt -- Kits							1046	0.2											1046	0.2
FY 1999 Eqpt -- Kits									1046	0.2									1046	0.2
FY 2000 Eqpt -- kits										0.2										
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installation	785	0.1	720	0.1	911	0.2	1046	0.2	1046	0.2									4508	0.8
Total Procurement Cost		0.3		0.2		0.3		0.3		0.2										1.3

INDIVIDUAL MODIFICATION																																																																																						
								Date	February 1998																																																																													
<b>MODIFICATION TITLE:</b> Pulse - Jet System (PJS) [MOD 10] 1-92-05-4475																																																																																						
<b>MODELS OF SYSTEMS AFFECTED:</b> M1 = 0, IPM1 = 0, M1A1 = 4327, M1A2 = 228 TOTAL RQMT = 4555																																																																																						
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The Pulse - Jet System (PJS) replaces a large portion of the current engine air filtration system. The purpose of PJS is to extend the time between required air path servicing in any severe dust environment. The current system requires frequent servicing in such an environment which can introduce dust into the clean air path as each servicing requires that the path is broken in order to complete the service. PJS greatly reduces the number of times the clean air path requires servicing. The result is improved combat performance and reduced O&amp;S costs. PJS was identified as user priority number one by Abrams tank units involved in Operation Desert Storm (ODS). NOTE: 180ea additional PJS Kits were procured using FY97 DBOF OSCR (O &amp; S Cost Reduction) funds. This procurement is NOT a part of the Abrams tank MOD Line procurements but the 180 are being installed using MOD Line \$\$\$, thus total procured will be 180 less than the total installed.</p>																																																																																						
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Pr Yr	FY 1997			FY 1998			FY 1999				FY 2000			FY 2001																																																																								
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																						
<b>Inputs</b>	543	36	36	36	36	9																																																																																
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	FY 2002			FY 2003			FY 2004				FY 2005			Totals																																																																								
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INDIVIDUAL MODIFICATION													
Pulse - Jet System (PJS) [MOD 10] 1-92-05-4475													
Date February 1998													
MODIFICATION TITLE (Cont):													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E													
PROCUREMENT													
Kit Quantity	543		144		45								4375
Installation Kits													
Installation Kits, Nonrecurring													
Equipment		24.6		6.7		2.1						253.2	286.6
Equipment, Nonrecurring		0.6											0.6
Engineering Change Orders		1.0											1.0
Testing		0.9											0.9
Training Equipment													
Support Equipment													
Other													
* + 180ea Procured with DBOF OSCF Funds.													
** 228 Installed in CY97 using prior year funds													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits	17	1.9	228**		180	1.4	118	0.9					543
FY 1997 Eqpt -- Kits							144	1.2					144
FY 1998 Eqpt -- Kits							36	0.3	189	1.5			225
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- Kits													
TC Equip -- 3643 Kits													
Total Installment	17	1.9	228		180	1.4	298	2.4	189	1.5			3643
Total Procurement Cost		29.0		6.7		3.5		2.4		1.5			4555
													340.0

INDIVIDUAL MODIFICATION																																																																																																																			
										Date	February 1998																																																																																																								
<b>MODIFICATION TITLE:</b> Mounted Water Ration Heater (MWRH) [MOD 11] 1-92-05-4426																																																																																																																			
<b>MODELS OF SYSTEMS AFFECTED:</b> M1 = 0, IPM1 = 0, M1A1 = 1501, M1A2 = 0 TOTAL RQMT = 1501																																																																																																																			
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The purpose of the Mounted Water Ration Heater (MWRH) is to provide the Abrams tank crew with the internal capability to heat water and rations during extended field operations without having to exit from the protection of the vehicle.</p> <p>NOTE: ATCOM / PM SOLDIER procured the MWRH. Abrams tank funds / data found herein are for the integration kit and installation only. Integration Kit is being fabricated by Anniston Army Depot (ANAD) so there is no Hardware Contract. Installation will also be by ANAD.</p>																																																																																																																			
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th colspan="4" style="text-align: center;"><u>PLANNED</u></th> <th colspan="4" style="text-align: center;"><u>ACCOMPLISHED</u></th> </tr> </thead> <tbody> <tr> <td>Preliminary Design Review</td> <td>-</td><td>-</td><td>-</td><td>-</td> <td>4Q92</td> <td></td><td></td><td></td> </tr> <tr> <td>Critical Design Review</td> <td>-</td><td>-</td><td>-</td><td>-</td> <td>1Q93</td> <td></td><td></td><td></td> </tr> <tr> <td>Contractor Test &amp; Eval.</td> <td>-</td><td>-</td><td>-</td><td>-</td> <td>1Q93</td> <td></td><td></td><td></td> </tr> <tr> <td>Development Test &amp; Eval.</td> <td>-</td><td>-</td><td>-</td><td>-</td> <td>3Q93</td> <td></td><td></td><td></td> </tr> <tr> <td>Initial Operational Test &amp; Eval.</td> <td>-</td><td>-</td><td>-</td><td>-</td> <td>3Q93</td> <td></td><td></td><td></td> </tr> <tr> <td>IPR Production Decision</td> <td>-</td><td>-</td><td>-</td><td>-</td> <td>2Q95</td> <td></td><td></td><td></td> </tr> <tr> <td>TDP Available</td> <td>-</td><td>-</td><td>-</td><td>-</td> <td>1Q96</td> <td></td><td></td><td></td> </tr> </tbody> </table>													<u>PLANNED</u>				<u>ACCOMPLISHED</u>				Preliminary Design Review	-	-	-	-	4Q92				Critical Design Review	-	-	-	-	1Q93				Contractor Test & Eval.	-	-	-	-	1Q93				Development Test & Eval.	-	-	-	-	3Q93				Initial Operational Test & Eval.	-	-	-	-	3Q93				IPR Production Decision	-	-	-	-	2Q95				TDP Available	-	-	-	-	1Q96																																			
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<b>METHOD OF IMPLEMENTATION:</b> Depot Teams <b>ADMINISTRATIVE LEADTIME:</b> 3 Months <b>PRODUCTION LEADTIME:</b> 3 Months <b>Contract Dates:</b> FY 1997 N/A      FY 1998 N/A      FY 1999 N/A <b>Delivery Date:</b> FY 1997 N/A      FY 1998 N/A      FY 1999 N/A																																																																																																																			

INDIVIDUAL MODIFICATION																			
Mounted Water Ration Heater (MWRH) [MOD 11] 1-92-05-4426																			
MODIFICATION TITLE (Cont):																			
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
1501																		1501	
RD&E																		1.9	
PROCUREMENT																			
Kit Quantity																			
Installation Kits																			
Installation Kits, Nonrecurring Equipment																			
Equipment, Nonrecurring Engineering Change Orders																			
Data																			
Training Equipment																			
Support Equipment																			
Other																			
Interim Contractor Support																			
Installation of Hardware																			
FY 1996 & Prior Eqpt -- Kits				750		0.1		751		0.1								1501	
FY 1997 Eqpt -- Kits																			
FY 1998 Eqpt -- Kits																			
FY 1999 Eqpt -- Kits																			
FY 2000 Eqpt -- kits																			
FY 2001 Eqpt -- kits																			
FY 2002 Eqpt -- kits																			
FY 2003 Eqpt -- kits																			
TC Equip-Kits																			
Total Installation				750		0.1		751		0.1								1501	
Total Procurement Cost		1.9		0.1		0.1												2.1	

INDIVIDUAL MODIFICATION																																																																							
Date										February 1998																																																													
MODIFICATION TITLE: System Enhancement Package (SEP) [MOD 12] 1-96-05-4505																																																																							
MODELS OF SYSTEMS AFFECTED: M1 = 0, IPM1 = 0, M1A1 = 0, M1A2 = 627 TOTAL RQMT = 627																																																																							
DESCRIPTION / JUSTIFICATION:																																																																							
<p>The System Enhancement Package (SEP) consists of M1A2 hardware and software changes which support the US Army's "Digitization of the Battlefield" effort. This effort upgrades the M1A2 electronics suite with improved processors, increased memory and software partitioning necessary for the M1A2 to operate in the Army's planned common operating environment and adds second generation thermal imaging capabilities to the Commander's Independent Thermal Viewer (CITV) and Gunner's Primary Sight (GPS) which are designed to significantly increase the capabilities of these Fire-Control sub-systems. This upgrade also allows for future growth without significant changes to the vehicle architecture so that insertion of future technology may be facilitated. These changes are designed to be exportable to other Abrams platforms, meet Army requirements for joint interoperability with Combined Arms Command &amp; Control Systems and maximize commonality with other Ground Combat systems. For this effort procurement funds will include installation costs.</p>																																																																							
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:																																																																							
PLANNED						ACCOMPLISHED																																																																	
Preliminary Design Review						3Q95																																																																	
Critical Design Review						2Q97																																																																	
Contractor Test & Eval.						3Q98																																																																	
Development Test & Eval.						1Q99																																																																	
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IPR Production Decision						2Q99																																																																	
TDP Available						4Q99																																																																	
Installation Schedule:																																																																							
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FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																							
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METHOD OF IMPLEMENTATION: Contractor Teams																																																																							
ADMINISTRATIVE LEADTIME: 6 Months																																																																							
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Contract Dates: FY 1997 N/A FY 1998 N/A FY 1999 N/A																																																																							
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INDIVIDUAL MODIFICATION																			February 1998	
System Enhancement Package (SEP) [MOD 12] 1-96-05-4505																			Date	
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
ROD&E																				
PROCUREMENT																				
Kit Quantity											25		45		65		492		627	
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment											46.5		82.8		107.4		655.5		892.2	
Equipment, Nonrecurring																				
Engineering Change Orders										2.9										2.9
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
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FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installation										2.9		46.5		82.8		107.4		655.5		895.1
Total Procurement Cost																				

INDIVIDUAL MODIFICATION												Date	February 1998																																																																																																								
MODIFICATION TITLE: Embedded Battle Command (EBC) [MOD 13] 1-96-05-4516																																																																																																																					
MODELS OF SYSTEMS AFFECTED: M1A2																																																																																																																					
DESCRIPTION / JUSTIFICATION: Embedded Battle Command (EBC) is a part of Horizontal Battlefield Digitization (HBD). EBC is an annual software "drop" into each fielded M1A2 tank. There is no hardware associated with this modification. The purpose of EBC is to assure that all M1A2's have up - to - date and identical computer software with the latest State - of - the - Art changes installed on a regular basis. There is no delivery or installation schedule in the normal sense of these terms. Each fielded M1A2 will have its onboard computers upgraded every year.																																																																																																																					
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <u>PLANNED</u>            Preliminary Design Review - - - - -            Critical Design Review - - - - -            Contractor Test &amp; Eval. - - - - -            Development Test &amp; Eval. - - - - -            Initial Operational Test &amp; Eval. - - - - -            IPR Production Decision - - - - -         </td> <td style="width: 50%; vertical-align: top;"> <u>ACCOMPLISHED</u>            3Q97            4Q97            1Q98            3Q98            4Q98            2Q98         </td> </tr> </table>														<u>PLANNED</u> Preliminary Design Review - - - - - Critical Design Review - - - - - Contractor Test & Eval. - - - - - Development Test & Eval. - - - - - Initial Operational Test & Eval. - - - - - IPR Production Decision - - - - -	<u>ACCOMPLISHED</u> 3Q97 4Q97 1Q98 3Q98 4Q98 2Q98																																																																																																						
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Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				To Complete																																																																																																				
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INDIVIDUAL MODIFICATION												Date	February 1998																																																																																																																																																																																														
MODIFICATION TITLE: External Auxiliary Pwr Unit (EAPU) [MOD 14] 1-85-05-4057																																																																																																																																																																																																											
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<p>The current use of the Abrams Tank in stationary night defensive position, known as Silent Watch Mode, requires long duration idling of the AGT - 1500 vehicle main engine in order to generate the required electricity. The External Auxiliary Power Unit (EAPU) will provide power for this type of requirement at greatly reduced fuel usage and without main engine wear. The EAPU continuously delivers 2.2 KW of power at 28 Volts DC. The EAPU will be mounted in the left side of the turret bustle rack and will be fully integrated with the tank electrical systems. The EAPU has its own fuel supply and can provide power for 10 to 12 hours on one tank - full of diesel fuel. The Army is procuring an additional 336 EAPUs as a result of an FY97 Congressional plus-up. The EAPU will be used with the M1A2s until they are retrofitted with SEP (including the Under Armor EAPU).</p>																																																																																																																																																																																																											
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Contract Dates: FY 1997 SEP 97 FY 1998 N/A FY 1999 N/A																																																																																																																																																																																																											
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INDIVIDUAL MODIFICATION																				
Date																				
February 1998																				
External Auxiliary Pwr Unit (EAPU) [MOD 14] 1-85-05-4057																				
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
RD&E PROCUREMENT Kit Quantity Installation Kits Installation Kits, Nonrecurring Equipment Equipment, Nonrecurring Engineering Change Orders Data Training Equipment Support Equipment Other Interim Contractor Support	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
			336															1164		1500
				8.0															32.6	40.6
			</																	

INDIVIDUAL MODIFICATION												Date	February 1998
MODIFICATION TITLE: External Auxiliary Pwr Unit Upgrade (EAPUU) [MOD 15] 1-97-05-4521													
MODELS OF SYSTEMS AFFECTED:													
M1 = 0, IPM1 = 0, M1A1 = 1500, M1A2 = 0 TOTAL RQMT = 1500													
DESCRIPTION / JUSTIFICATION:													
<p>This modification is the Upgrade of 1500ea External Auxiliary Power Units (EAPU's) procured / fielded in FY91 / 94. The upgrade replaces the 12 volt starter with a 24 volt starter, adds an improved voltage regulator and a NATO standard receptacle and remove the 24 volt battery. These changes will increase the reliability and durability of the existing EAPU's. Installation costs for this modification are included in the hardware cost and the prime hardware contractor will also install the modification.</p>													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:													
										PLANNED		ACCOMPLISHED	
Preliminary Design Review										-		3Q95	
Critical Design Review										-		2Q96	
Contractor Test & Eval.										-		4Q96	
Initial Operational Test & Eval.										-		2Q97	
IPR Production Decision										-		4Q97	
T D P Available										-		2Q98	
Installation Schedule:													
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
Totals		1	2	3	4	1	2	3	4	1	2	3	4
Inputs													
Outputs													
				350		500		650		750			
				750		750		750					
Totals													
1		2		3		4		1		2		3	
Inputs													
Outputs													
												1500	
												1500	
METHOD OF IMPLEMENTATION: Contractor Inst.													
Contract Dates:		FY 1997		FEB 98		FY 1998		N / A		FY 1999		N / A	
Delivery Date:		FY 1997		JUN 98		FY 1998		N / A		FY 1999		N / A	
ADMINISTRATIVE LEADTIME: 2 Months										PRODUCTION LEADTIME: 4 Months			

INDIVIDUAL MODIFICATION													
Date February 1998													
External Auxiliary Pwr Unit Upgrade (EAPUU) [MOD 15] 1-97-05-4521													
MODIFICATION TITLE (Cont):													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RD&E													
PROCUREMENT													
Kit Quantity			1500										1500
Installation Kits													
Installation Kits, Nonrecurring													
Equipment													
Equipment, Nonrecurring													
Engineering Change Orders													
Data													
Training Equipment													
Support Equipment													
Other													
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits													
FY 1997 Eqpt -- Kits													
FY 1998 Eqpt -- Kits													
FY 1999 Eqpt -- Kits													
FY 2000 Eqpt -- kits													
FY 2001 Eqpt -- kits													
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installation													
Total Procurement Cost			2.4		1500								1500
													2.4





INDIVIDUAL MODIFICATION																		February 1998		
NBC Fire Warning (NBCFW) [MOD 16] 1-97-05-4524																		Date		
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
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Data																				
Training Equipment																				
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Other																				
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FY 1998 Eqpt -- Kits																				
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FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip -- 1604 Kits																				
Total Installation																				
Total Procurement Cost																				

INDIVIDUAL MODIFICATION																																																																																																																																																																																														
Date										February 1998																																																																																																																																																																																				
<b>MODIFICATION TITLE:</b> Hand-Held Fire Extinguisher (HHFE) [MOD 17] 1-97-05-4525																																																																																																																																																																																														
<b>MODELS OF SYSTEMS AFFECTED:</b> M1 = 0, IPM1 = 0, M1A1 = 3003, M1A2 = 747 TOTAL RQMT = 3750																																																																																																																																																																																														
<b>DESCRIPTION / JUSTIFICATION:</b> <p>Under the terms of the 1988 Montreal Protocol in which 93 countries including the U.S.A. agreed to phase out Ozone Depleting Chemicals (ODS's), Halon 1301 used in the Abrams Tank for fire suppression must be eliminated. One current program does this in the engine compartment. This additional program will replace Halon Hand - Held Fire Extinguishers in the Abrams turret with new non - Halon extinguishers (The agent to be used is not yet known but testing to identify the best choice is underway). The funding identified here - in will support the initial buy of Abrams Hand - held Fire Extinguishers. Note that installation funding is not identified. This program is expected to result in a one - for - one replacement in each Abrams tank which can easily be carried out by tank crews so deliveries will be directly to tank units and no formal installation program is needed. Also note that four (4) extinguishers are required per tank so that 15000 will equip the 3750 tanks noted above while Reserve and N.G. tank requirements will be funded within their individual budgets.</p>																																																																																																																																																																																														
<table border="0" style="width:100%;"> <tr> <td style="width:50%; vertical-align: top;"> <b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>            Preliminary Design Review - - - - -            Critical Design Review - - - - -            Initial Operational Test &amp; Eval. - - - - -            IPR Production Decision - - - - -            T D P Available - - - - -         </td> <td style="width:50%; vertical-align: top;"> <table border="0"> <tr> <td style="text-align: center;"><u>PLANNED</u></td> <td style="text-align: center;"><u>ACCOMPLISHED</u></td> </tr> <tr> <td style="text-align: center;">2Q97</td> <td style="text-align: center;">3Q97</td> </tr> <tr> <td style="text-align: center;">2Q98</td> <td></td> </tr> <tr> <td style="text-align: center;">4Q98</td> <td></td> </tr> <tr> <td style="text-align: center;">2Q99</td> <td></td> </tr> <tr> <td style="text-align: center;">3Q99</td> <td></td> </tr> </table> </td> </tr> </table>												<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> Preliminary Design Review - - - - - Critical Design Review - - - - - Initial Operational Test & Eval. - - - - - IPR Production Decision - - - - - T D P Available - - - - -	<table border="0"> <tr> <td style="text-align: center;"><u>PLANNED</u></td> <td style="text-align: center;"><u>ACCOMPLISHED</u></td> </tr> <tr> <td style="text-align: center;">2Q97</td> <td style="text-align: center;">3Q97</td> </tr> <tr> <td style="text-align: center;">2Q98</td> <td></td> </tr> <tr> <td style="text-align: center;">4Q98</td> <td></td> </tr> <tr> <td style="text-align: center;">2Q99</td> <td></td> </tr> <tr> <td style="text-align: center;">3Q99</td> <td></td> </tr> </table>	<u>PLANNED</u>	<u>ACCOMPLISHED</u>	2Q97	3Q97	2Q98		4Q98		2Q99		3Q99																																																																																																																																																																						
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<b>METHOD OF IMPLEMENTATION:</b> By Tank Crew <table border="0" style="width:100%;"> <tr> <td style="width:33%;">Contract Dates:</td> <td style="width:33%;">FY 1997 N/A</td> <td style="width:33%;">FY 1998 N/A</td> </tr> <tr> <td>Delivery Date:</td> <td>FY 1997 N/A</td> <td>FY 1998 N/A</td> </tr> </table> <table border="0" style="width:100%;"> <tr> <td style="width:33%;">ADMINISTRATIVE LEADTIME:</td> <td style="width:33%;">2 Months</td> <td style="width:33%;">PRODUCTION LEADTIME:</td> </tr> <tr> <td></td> <td></td> <td>4 Months</td> </tr> </table>												Contract Dates:	FY 1997 N/A	FY 1998 N/A	Delivery Date:	FY 1997 N/A	FY 1998 N/A	ADMINISTRATIVE LEADTIME:	2 Months	PRODUCTION LEADTIME:			4 Months																																																																																																																																																																							
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INDIVIDUAL MODIFICATION														
Date February 1998														
MODIFICATION TITLE (Cont): Hand-Held Fire Extinguisher (HHFE) [MOD 17] 1-97-05-4525														
FINANCIAL PLAN: (\$ in Millions)														
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E														
PROCUREMENT														
Kit Quantity									15000					15000
Installation Kits														
Installation Kits, Nonrecurring														
Equipment														
Equipment, Nonrecurring														
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FY 1996 & Prior Eqpt -- Kits														
FY 1997 Eqpt -- Kits														
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FY 1999 Eqpt -- Kits														
FY 2000 Eqpt -- kits														
FY 2001 Eqpt -- kits														
FY 2002 Eqpt -- kits														
FY 2003 Eqpt -- kits														
TC Equip-Kits														
Total Installation									1.8					1.8
Total Procurement Cost														

INDIVIDUAL MODIFICATION																																																																																																																																																																																																																											
										Date	February 1998																																																																																																																																																																																																																
<b>MODIFICATION TITLE:</b> M1A2 Field Mods (A2FM) [MOD 18] 1-97-05-4534																																																																																																																																																																																																																											
<b>MODELS OF SYSTEMS AFFECTED:</b> M1A2																																																																																																																																																																																																																											
<b>DESCRIPTION/JUSTIFICATION:</b> M1A2 Field Modifications (A2FM) represents funding for a continuing series of upgrades for M1A2 unique LRU's (Line Replaceable Unit's) and/or SRU's (Shop Replaceable Unit's). Examples of these include the Fire - Control Electronics Unit (FCEU), Commander's Integrated Display (CID) and various electronic "cards" (A6, A9, A10, A12 & A13 for example) for which modification rather than replacement is both feasible and cost effective. There is no set quantity for this modification. These upgrades will be applied to every fielded M1A2 tank as they are proven and approved and the number of fielded M1A2's will continue to increase. This program is expected to "run" as long as M1A2 production continues.																																																																																																																																																																																																																											
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <div style="display: flex; justify-content: space-between;"> <div> <b>PLANNED</b>            IPR Production Decision - - - - - 2Q96            T D P Available - - - - - 2Q96         </div> <div> <b>ACCOMPLISHED</b>            2Q96            2Q96         </div> </div>																																																																																																																																																																																																																											
<b>Installation Schedule:</b> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td><b>Totals</b></td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td><b>Inputs</b></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td><b>Outputs</b></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="4">Totals</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th colspan="4">Complete</th> </tr> </thead> <tbody> <tr> <td><b>Totals</b></td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td colspan="4"></td> </tr> <tr> <td><b>Inputs</b></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td colspan="4"></td> </tr> <tr> <td><b>Outputs</b></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td colspan="4"></td> </tr> </tbody> </table>												Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	<b>Totals</b>	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	<b>Inputs</b>																					<b>Outputs</b>																					Pr Yr	FY 2002				FY 2003				FY 2004				FY 2005				Totals				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete				<b>Totals</b>	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					<b>Inputs</b>																					<b>Outputs</b>																				
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<b>METHOD OF IMPLEMENTATION:</b> Contractor Team <b>ADMINISTRATIVE LEADTIME:</b> 3 Months <b>PRODUCTION LEADTIME:</b> 6 Months <b>Contract Dates:</b> FY 1997 FEB 97    FY 1998 FEB 98    FY 1999 FEB 99 <b>Delivery Date:</b> FY 1997 AUG 97    FY 1998 AUG 98    FY 1999 AUG 99																																																																																																																																																																																																																											

MODIFICATION TITLE (Cont):														M1A2 Field Mods (A2FM) [MOD 18] 1-97-05-4534				INDIVIDUAL MODIFICATION				Date		February 1998			
FINANCIAL PLAN: (\$ in Millions)																											
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL									
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$								
RDT&E																											
PROCUREMENT																											
Kit Quantity																											
Installation Kits																											
Installation Kits, Nonrecurring Equipment																											
Equipment, Nonrecurring Engineering Change Orders																											
Data																											
Training Equipment																											
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FY 2001 Eqpt -- kits																											
FY 2002 Eqpt -- kits																											
FY 2003 Eqpt -- kits																											
TC Equip-Kits																											
Total Installation																											
Total Procurement Cost																											

INDIVIDUAL MODIFICATION															Date	February 1998					
<b>MODIFICATION TITLE:</b> Matrix Support (MXSP) [MOD 19] N/A																					
<b>MODELS OF SYSTEMS AFFECTED:</b> WHOLE FLEET																					
<b>DESCRIPTION / JUSTIFICATION:</b> Matrix Support funds Government salaries in support of the entire Abrams Tank Modification program.																					
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>																					
<b>Installation Schedule:</b>																					
Inputs Outputs	Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Inputs Outputs	Totals																				
Inputs Outputs	Totals	FY 2002				FY 2003				FY 2004				FY 2005				To Complete			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
Inputs Outputs	Totals																				
<b>METHOD OF IMPLEMENTATION:</b> PM / PEO Initiative <b>ADMINISTRATIVE LEADTIME:</b> 0 Months <b>PRODUCTION LEADTIME:</b> 0 Months																					
<b>Contract Dates:</b> FY 1997 N/A    FY 1998 N/A    FY 1999 N/A																					
<b>Delivery Date:</b> FY 1997 N/A    FY 1998 N/A    FY 1999 N/A																					



INDIVIDUAL MODIFICATION												Date	February 1998
<b>MODIFICATION TITLE:</b> Prior Year Mod Installation (PYMI) [MOD 20] N / A													
<b>MODELS OF SYSTEMS AFFECTED:</b>													
M1 = 355, 1PM1 = 892, M1A1 = 4351, M1A2 = 1079 TOTAL RQMT = 6847.													
<b>DESCRIPTION / JUSTIFICATION:</b> Continuing effort to install / apply modification kits procured during or before FY90. This effort was previously budgeted and executed within O&MA (P7M). Beginning in FY90 this effort transitioned from O&MA to PAA funding.													
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> There are no hardware milestones associated with this program. All funding detailed here-in is for the installation of Modification Kits procured during or before FY90.													
<b>Installation Schedule:</b>													
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
Totals		1	2	3	4	1	2	3	4	1	2	3	4
6847													
6408		100	99	99	21	21							
<b>Inputs</b>													
<b>Outputs</b>													
Totals													
6847													
6847													
<b>Inputs</b>													
<b>Outputs</b>													
Totals													
6847													
6847													
<b>METHOD OF IMPLEMENTATION:</b> N / A													
<b>ADMINISTRATIVE LEADTIME:</b> N / A Months													
<b>PRODUCTION LEADTIME:</b> N / A Months													
<b>Contract Dates:</b> FY 1997 N / A FY 1998 N / A FY 1999 N / A													
<b>Delivery Date:</b> FY 1997 N / A FY 1998 N / A FY 1999 N / A													



INDIVIDUAL MODIFICATION														Date		February 1998				
MODIFICATION TITLE (Cont):														Prior Year Mod Installation (PYMI) [MOD 20] N / A						
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																				
PROCUREMENT																				
Kit Quantity	6847																		6847	
Installation Kits																				
Installation Kits, Nonrecurring Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	6408	65.0	397	4.9	42	0.5													6847	70.4
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installation	6408	65.0	397	4.9	42	0.5													6847	70.4
Total Procurement Cost		65.0		4.9		0.5														70.4

INDIVIDUAL MODIFICATION												Date	February 1998
MODIFICATION TITLE: M1A1-D Integration Kit OSIP NO. 21													
MODELS OF SYSTEMS AFFECTED: M1 = 0, IPM1 = 0, M1A1 = 1535, M1A2 = 0 TOTAL RQMT = 1535													
DESCRIPTION / JUSTIFICATION: This modification provides an integration kit for the Force XXI Battle Command Brigade and Below (FBCB2) into the M1A1 tank. Specifically, it complements the basic FBCB2 C2 integration kit by providing a far target designate capability for M1A1 tanks. The funding requested outfits the Army's first digital division. This modification includes integration of a pointing device into the tank and rework of the tank computer to provide range and elevation data necessary for far target designate. The installation costs for this modification are included in the hardware costs.													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:													
										PLANNED		ACCOMPLISHED	
Preliminary Design Review										2Q98			
Contractor Test & Eval.										3Q98			
Critical Design Review										4Q98			
IPR Production Decision										4Q98			
T D P Available										1Q99			
Installation Schedule:													
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
Totals		1	2	3	4	1	2	3	4	1	2	3	4
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
METHOD OF IMPLEMENTATION: Contractor Team													
Contract Dates:		FY 1997		N/A		FY 1998		N/A		FY 1999		JAN 99	
Delivery Date:		FY 1997		N/A		FY 1998		N/A		FY 1999		AUG 99	
PRODUCTION LEADTIME: 7 Months													



Exhibit P-40, Budget Item Justification Sheet													Date: February 1998
Appropriation / Budget Activity/Serial No:			P-1 Item Nomenclature:										
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			ABRAMS UPGRADE PROGRAM (GA0750)										
Program Elements for Code B Items:			Other Related Program Elements:										
Code:			A										
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty	172	34	100	120	120	120	120	105	90	88		1069	
Gross Cost	658.0	132.2	440.1	501.0	586.8	666.2	667.5	630.1	595.6	675.3	344.3	5897.1	
Less PY Adv Proc	196.7	33.9	181.3	297.2	258.2	253.5	262.9	242.7	153.6	144.3		2024.4	
Plus CY Adv Proc	230.6	181.3	297.2	258.2	253.5	262.9	242.7	153.6	144.3			2024.4	
Net Proc (P-1)	691.9	279.6	556.0	462.0	582.2	675.6	647.3	541.0	586.3	530.9	344.3	5897.1	
Initial Spares	1.6	2.7	17.1	9.2	13.7	9.8	9.9	10.8	16.9	16.0	38.0	145.7	
Total Proc Cost	693.5	282.3	573.1	471.2	595.8	685.4	657.2	551.8	603.2	546.9	382.3	6042.8	
Flyaway U/C	3.5	3.6	3.7	3.6	4.3	4.9	4.9	5.2	5.7	6.8			
Wpn Sys Proc U/C	3.8	4.0	4.6	4.3	5.0	5.6	5.6	6.1	6.8	7.9			

DESCRIPTION: The Abrams Tank Upgrade Program supports the Department of Army vision for the future. The Upgrade Program will reconfigure M1 Tanks to the M1A2 configuration making it a more survivable and lethal tank. This includes the Commander's Independent Thermal Viewer (CITV), Improved Commander's Weapon Station (ICWS), Position Navigation (POS/NAV) equipment, Radio Interface Unit (RIU), Core Architecture, D. U. Armor, 120mm Gun and Nuclear, Biological and Chemical (NBC) protection. In FY99 2nd Generation Forward Looking Infrared (FLIR) and vehicle core electronic upgrades will be cut into production.

JUSTIFICATION: The Upgrade Program will modernize the U.S. Army's armor force to enhance the combat effectiveness of the Abrams Tank Fleet and maintain the key elements of the tank industrial base.

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKO CMBT VEHS / 1 / Tracked Combat Vehicles			P-1 Line Item Nomenclature: ABRAMS UPGRADE PROGRAM (GA0750)			Weapon System Type:			Date: February 1998		
WTCV Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
1. Basic Vehicle	A		215393	100	2154	293949	120	2450	301095	120	2509	322228	120	2685
2. Armor			35742	80	447	27569	122	226	39292	121	325	40186	120	335
3. H/TEU			5850	200	29	7170	240	30	6748	240	28			
4. Engine (DECU)			2347	100	23	2655	120	22	3072	120	26	3114	120	26
5. Transmission			22684	100	227	22534	120	188	23482	120	196	23799	120	198
6. Final Drive			1379	200	7	1491	240	6	1375	240	6	1375	240	6
7. Fire Control			32711	100	327	39485	120	329	39347	120	328	1805	120	15
8. Track			3327	15600		5678	18720		5696	18720		5696	18720	
9. Roadwheels			933	3200		1421	3840		1421	3840		1421	3840	
10. Gun Mounts			2142	50	43	2057	60	34	2558	60	43	3290	60	55
11. Gun			11672	100	117	11827	120	99	12073	120	101	15487	120	129
12. Driver's Night Viewer			539	100	5	599	120	5	617	120	5	626	120	5
13. Basic Issue Items			752	100	8	804	120	7	769	120	6	915	120	8
14. MILSTRIPS/RIK			684	100	7	502	120	4	663	120	6	672	120	6
15. VIS			568	60	9	978	120	8	1049	120	9	1135	120	9
16. Special Tools & Test Sets			3376			753			18400			15600		
17. Contract Engineering			59087			62557			65162			72083		
18. Project Mgt Administration			2401			1685			1711			1726		
19. Matrix Support			7913			491			4324			4361		
20. Auxiliary Services			2992			245			2270			3251		
21. Engineering Support			10901			2643			6956			7015		
22. Quality Support			1184			926			1080			1089		
23. Testing			4114			4172			4237			4273		
24. Transportation (FDT)			525			619			629			634		
25. Total Package Fielding			10894			8236			8389			8735		
26. II Gen FLIR									9030			96636	120	805
27. STS C2 FFTA 01									1038			1017		
28. Pre Mod Depot Maint									24316	120	203	28026	120	234
29. Industrial Base/Shut-Down														
30. NonRecurring Cost (Pilots,GFE Seed,IPT														
31. Service Life Extension (SLE)														
<b>TOTAL</b>			<b>440100</b>			<b>501046</b>			<b>586799</b>			<b>666195</b>		
<b>Gross P-1 End Cost</b>			<b>440100</b>	100	4401	<b>501046</b>	120	4175	<b>586799</b>	120	4890	<b>666195</b>	120	5552
Less: Prior Year Adv Proc			181306			297218			258171			253534		
<b>Net P-1 Full Funding Cost</b>			<b>258794</b>			<b>203828</b>			<b>328628</b>			<b>412661</b>		
Plus: P-1 CY Adv Proc			297218			258171			253534			262942		
Other Non P-1 Costs			19774			24955								
Initial Spares			17057			9248			13662			9800		
Mods														
<b>TOTAL</b>			<b>592843</b>			<b>496202</b>			<b>595824</b>			<b>685403</b>		

Exhibit P-5a, Budget Procurement History and Planning												Date:	February 1998
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles				Weapon System Type:			P-1 Line Item Nomenclature: ABRAMS UPGRADE PROGRAM (GA0750)						
WBS Cost Elements:		Contractor and Location		Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date	
Fiscal Years													
1. Basic Vehicle													
FY 96		GDLS/1		/2(1)	TACOM-Warren	Jul-96	Oct-96	100	2154	Yes		Jan-95	
FY 97		GDLS/1		/2(2)	TACOM-Warren	Dec-96	Aug-97	120	2450	Yes		Jan-95	
FY 98		GDLS/1		/2(3)	TACOM-Warren	Feb-98	Aug-98	120	2509	Yes		Jan-95	
FY 99		GDLS/1		/2(4)	TACOM-Warren	Feb-99	Aug-99	120	2685	Yes		Jan-95	
2. Armor/3													
FY 96		LITCO/5		SS/CPFF	DOE/4	Mar-95	Apr-96	80	447	NA		NA	
FY 97		LITCO/5		SS/CPFF	DOE/4	Mar-96	Feb-97	122	226	NA		NA	
FY 98		LITCO/5		SS/CPFF	DOE/4	Feb-97	Feb-98	121	325	NA		NA	
FY 99		LITCO/5		SS/CPFF	DOE/4	Jan-98	Feb-99	120	335	NA		NA	
3. H/TEU													
FY 96		GDLS/1		SS/FFP	TACOM-Warren/6	Apr-95	Apr-96	200	29	Yes		Feb-96	
FY 97		GDLS/1		C/FFP	TACOM-ACALA/7	May-96	Feb-97	240	30	Yes		Feb-96	
FY 98		GDLS/1		OPTION	TACOM-ACALA/7	Mar-97	Feb-98	240	28	Yes		Feb-96	
4. Engine (DECU)/10													
FY 96		AlliedSignal/8		SS/FFP	TACOM-Warren	Feb-95	Apr-96	100	23	Yes		Aug-94	
FY 97		AlliedSignal/8		OPTION	TACOM-Warren	Mar-96	Feb-97	120	22	Yes		Aug-94	
FY 98		AlliedSignal/8		OPTION	TACOM-Warren	Apr-97	Feb-98	120	26	Yes		Aug-94	
FY 99		AlliedSignal/8		SS/FFP	TACOM-Warren	Jan-98	Feb-99	120	26	Yes		Sep-97	
5. Transmission													
FY 96		Allison Transmission Div/9		OPTION	TACOM-Warren	Apr-95	Apr-96	100	227	Yes		Oct-93	
FY 97		Allison Transmission Div/9		OPTION	TACOM-Warren	Dec-95	Feb-97	120	188	Yes		Oct-93	
FY 98		Allison Transmission Div/9		SS/FFP/CF	TACOM-Warren	Sep-97	Feb-98	120	196	Yes		Dec-96	
FY 99		Allison Transmission Div/9		OPTION	TACOM-Warren	Feb-98	Feb-99	120	198	Yes		Dec-96	
REMARKS:													
/1. General Dynamics Land System, Warren, MI						/7. Awarded to GDLS on a separate competitive contract							
/2. SS/FFP/M5						/8. AlliedSignal/Control & Accessories, Tucson, AZ							
/3. Armor production leads tank production						/9. Allison Transmission Div, GM Corp, Indianapolis, IN							
/4. Department of Energy						/10. Awards are against a Navy BOA Contract therefore no RFP issued							
/5. Lockheed Idaho Technologies Company, Idaho Falls, Idaho						only letter with new requirements.							
/6. Awarded to GDLS as part of the Long Lead Material Contract													

Exhibit P-5a, Budget Procurement History and Planning												
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles					Weapon System Type:			P-1 Line Item Nomenclature: ABRAMS UPGRADE PROGRAM (GA0750)			Date: February 1998	
WBS Cost Elements: Fiscal Years		Contractor and Location		Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
6. Final Drive		TACOM NICP		REQ		Mar-95	Apr-96	200		7	Yes	NA
FY 96		LOC Performance, Inc/1		C/FFP	TACOM-Warren	Nov-95	Feb-97	240		6	Yes	Apr-95
FY 97		LOC Performance, Inc/1		OPTION	TACOM-Warren	Jan-97	Feb-98	240		6	Yes	Apr-95
FY 98		LOC Performance, Inc/1		OPTION	TACOM-Warren	Apr-98	Feb-99	240		6	Yes	Apr-95
7. Fire Control		Hughes/2/Various		Various	TACOM-ACALA	Var	Apr-96	100	327	Yes		Var
FY 96		Hughes/2/Various		Various	TACOM-ACALA	Var	Feb-97	120	329	Yes		Var
FY 97		Hughes/2/Various		Various	TACOM-ACALA	Var	Feb-98	120	328	Yes		Var
FY 98		Hughes/2/Various		Various	TACOM-ACALA	Var	Feb-99	120	15	Yes		Var
FY 99		Hughes/2/Various										
8. Track		Goodyear Tire & Rubber/3		C/FFP	TACOM-Warren	Feb-96	Apr-96	15600		Yes		Oct-95
FY 96		Goodyear Tire & Rubber/3		OPTION	TACOM-Warren	Mar-96	Feb-97	18720		Yes		Oct-95
FY 97		Goodyear Tire & Rubber/3		OPTION	TACOM-Warren	Nov-96	Feb-98	18720		Yes		Oct-95
FY 98		Goodyear Tire & Rubber/3		SS/FFP	TACOM-Warren	Apr-98	Feb-99	18720		Yes		Dec-97
FY 99		Goodyear Tire & Rubber/3										
9. Roadwheels		B&C Corp/4		/5	TACOM-Warren	Feb-95	Apr-96	3200		Yes		Jul-92
FY 96		B&C Corp/4		/5	TACOM-Warren	Mar-96	Feb-97	3840		Yes		Sep-95
FY 97		B&C Corp/4		/5	TACOM-Warren	Dec-96	Feb-98	3840		Yes		Sep-95
FY 98		B&C Corp/4		/5	TACOM-Warren	Apr-98	Feb-99	3840		Yes		Sep-95
FY 99		B&C Corp/4										
REMARKS: /1. Loc Performance, Inc, Plymouth, MI /2. Hughes Aircraft, El Segundo, CA /3. Goodyear Tire & Rubber Co., Akron, OH /4. B&C Corp, Barberton, OH /5. Requirement Contract/FFP												

Exhibit P-5a, Budget Procurement History and Planning												
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles					Weapon System Type: ABRAMS UPGRADE PROGRAM (GA0750)							
WBS Cost Elements: Fiscal Years		Contractor and Location		Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revis Avail	RFP Issue Date
10. Gun Mounts/1		RIA		WR		Jun-95	Apr-96	50	43	Yes		NA
FY 96		RIA		WR		Mar-96	Feb-97	60	34	Yes		NA
FY 97		RIA		WR		Feb-97	Feb-98	60	43	Yes		NA
FY 98		RIA		WR		Apr-98	Feb-99	60	55	Yes		NA
FY 99		RIA		WR								
11. Gun		Watervliet		WR		Mar-95	Apr-96	100	117	Yes		NA
FY 96		Watervliet		WR		Aug-96	Feb-97	120	99	Yes		NA
FY 97		Watervliet		WR		Mar-97	Feb-98	120	101	Yes		NA
FY 98		Watervliet		WR		Apr-98	Feb-99	120	129	Yes		NA
FY 99		Watervliet		WR								
12. Driver's Night Viewer		CECOM N1CP		REQ		Jul-95	Apr-96	100	5	Yes		NA
FY 96		CECOM N1CP		REQ		Jun-96	Feb-97	120	5	Yes		NA
FY 97		CECOM N1CP		REQ	CECOM	Sep-97	Feb-98	120	5	Yes		NA
FY 98		CECOM N1CP		REQ	CECOM	Jul-98	Feb-99	120	5	Yes		NA
FY 99		TBD		TBD								
13. Basic Issue Items		TACOM-ACALA		WR		May-95	Apr-96	100	8	Yes		NA
FY 96		TACOM-ACALA		WR		May-96	Feb-97	120	7	Yes		NA
FY 97		TACOM-ACALA		WR		Feb-97	Feb-98	120	6	Yes		NA
FY 98		TACOM-ACALA		WR		Apr-98	Feb-99	120	8	Yes		NA
FY 99		TACOM-ACALA		WR								
REMARKS: /1. RIA, Rock Island Arsenal, Rock Island, IL produces 50% of gun mounts. The remainder are procured with the GDLS contract.												



Exhibit P-5a, Budget Procurement History and Planning												
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles					Weapon System Type:		P-1 Line Item Nomenclature: ABRAMS UPGRADE PROGRAM (GA0750)					
WBS Cost Elements: Fiscal Years		Contractor and Location		Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
14. MILSTRIPS/RIK		NA		REQ/WR		Various	Apr-96	100	7	Yes		NA
FY 96		NA		REQ/WR		Various	Feb-97	120	4	Yes		NA
FY 97		NA		REQ/WR		Various	Feb-98	120	6	Yes		NA
FY 98		NA		REQ/WR		Various	Feb-99	120	6	Yes		NA
FY 99		NA		REQ/WR		Various						NA
15. VIS/1		Grumman/2		OPTION	CECOM	Dec-95	Apr-96	60	9	Yes		Sep-91
FY 96/3		Grumman/2		OPTION	CECOM	May-96	Feb-97	120	8	Yes		Sep-91
FY 97		Grumman/2		OPTION	CECOM	Apr-97	Feb-98	120	9	Yes		Sep-91
FY 98		Grumman/2		OPTION	CECOM	Jun-98	Feb-99	120	9	Yes		Sep-91
FY 99		Grumman/2		OPTION	CECOM							
26. II Gen FLIR		Various		SS/FFP	CECOM	Jan-98	Feb-99	120	805	Yes		Sep-96
FY 99												
REMARKS: /1. VIS, Vehicular Intercommunication System /2. Grumman Aerospace Corp, Bethpage, NY /3. 40 VIS Components were previously procured in Phase I												





[illegible]

FY 98 / 99 BUDGET PRODUCTION SCHEDULE															P-1 Item Nomenclature: ABRAMS UPGRADE PROGRAM (GA0750)										Date: February 1998										
COST ELEMENTS															Fiscal Year 02										Fiscal Year 03										
															Calendar Year 02					Calendar Year 03					Calendar Year 03					Calendar Year 03					
M F R	FY	S E R V	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	T E N	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	T E N	N O V	D E C	L		
1	95 & Pr	A	206	206																															
1	FY 96	A	100	100																															
1	FY 97	A	120	120																															
1	FY 98	A	120	120																															
1	FY 99	A	120	120																															
1	FY00	A	120	120																															
1	FY01	A	105	18	87																														
1	FY02	A	90	0	90																														
1	FY03	A	88	0	88																														







Advance Procurement Requirements Analysis-Funding (P-10A)										First System Award Date:		First System Completion Date:		Date:	
Appropriation / Budget Activity/Serial No:										Jul-96		Oct-96		February 1998	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles										P-1 Line Item Nomenclature / Weapon System:					
										ABRAMS UPGRADE PROGRAM (ADV PROC) (GA0750)					
										(\$ in Millions)					
	PLT (mos)	When Rqd (mos)	Pr Yrs	1995	1996	1997	1998	1999	2000	2001	2002	2003	To Comp	Total	
End Item Quantity:															
1. Basic Vehicle	18	6		77.1	193.0	142.8	100.2	116.9	129.5	57.3	80.8			897.7	
2. Armor	19	6		20.0	7.9	9.8	10.0	10.2	10.6	10.8	2.2			81.7	
3. H/TEU	13	6		5.9	7.2	6.7								19.7	
4. Engine (DECU)	20	6		2.1	2.5	3.1	3.1	3.1	2.8	2.5	2.5			21.7	
5. Transmission	19	6		22.3	22.4	23.4	23.6	24.0	21.4	18.7	18.7			174.5	
6. Final Drives	16	6		1.4	1.5	1.4	1.4	1.4	1.3	1.1	1.1			10.5	
7. Fire Control	16	6		32.5	39.3	38.8	1.8	1.8	1.6	1.5	1.5			118.7	
8. Track	19	6		3.3	5.7	5.7	5.7	5.8	5.1	4.5	4.5			40.2	
9. Roadwheels	16	6		0.9	1.4	1.4	1.4	1.4	1.3	1.1	1.1			10.1	
10. Gun Mounts	16	6		2.1	2.1	2.6	3.3	2.6	2.4	2.1	2.1			19.2	
11. Gun	16	6		11.3	11.4	10.6	15.4	12.4	11.1	9.9	9.9			91.9	
12. Driver's Night Viewer	13	6		0.5	0.6	0.5	0.6	0.6	0.6	0.5	0.5			4.5	
13. Basic Issue Items	16	6		0.7	0.8	0.7	0.9	0.8	0.7	0.6	0.6			5.8	
14. MILSTRIPS/RIK	16	6		0.6	0.5	0.7	0.7	0.7	0.6	0.5	0.5			4.7	
15. VIS	16	6		0.6	1.0	1.0	1.1	1.1	1.0	0.9	0.9			7.7	
26. II Gen FLIR	20	8				9.0	84.3	80.1	52.7	41.6	17.5			285.3	
29. Industrial Base/"Shut Down"															
Total Advance Procurement				181.3	297.2	258.2	253.5	262.9	242.7	153.6	144.3			1793.8	

Description:

- \* PLT excludes First Article Test (FAT) or other special test requirements for new producers or other factors.
- ALT is based on current long term contracts. ALT increase with new starts/new contractors/new contracts.
- PLT includes the 6 months requirement for components prior to tank delivery.

Description:

- \* PLT excludes First Article Test (FAT) or other special test requirements for new producers or other factors.
- ALT is based on current long term contracts. ALT increase with new starts/new contractors/new contracts.
- PLT includes the 6 months requirement for components prior to tank delivery.



Advance Procurement Requirements Analysis-Budget Justification (P-10B)									
Appropriation / Budget Activity/Serial No:				Date: February 1998					
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles				P-1 Line Item Nomenclature / Weapon System: ABRAMS UPGRADE PROGRAM (ADV PROC) (GA0750)					
				(\$ in Millions)					
End Item	PLT (mos)	Quantity Per Assembly	Unit Cost	1998			1999		
				Qty	Contract Forecast Date	Total Cost Request	Qty	Contract Forecast Date	Total Cost Request
1. Basic Vehicle	18	1	0.8	120	Various	100.2	120	Various	116.9
2. Armor	19	1	0.1	121	Jan 98	10.0	121	Jan 99	10.2
3. H/TEU	20	1	0.0	120	Jan 98	3.1	120	Dec 98	3.1
4. Engine (DECU)	19	1	0.2	120	Feb 98	23.6	120	Jan 99	24.0
5. Transmission	16	2	0.0	240	Apr 98	1.4	240	Apr 99	1.4
6. Final Drives	16	1	0.0	120	Various	1.8	120	Various	1.8
7. Fire Control	19	156	0.0	18720	Apr 98	5.7	18720	Nov 98	5.8
8. Track	16	32	0.0	3840	Apr 98	1.4	3840	Apr 99	1.4
9. Roadwheels	16	1	0.1	60	Apr 98	3.3	60	Apr 99	2.6
10. Gun Mounts	16	1	0.1	120	Apr 98	15.4	120	Apr 99	12.4
11. Gun	13	1	0.0	120	Jul 98	0.6	120	Jul 99	0.6
12. Driver's Night Viewer	16	1	0.0	120	Apr 98	0.9	120	Apr 99	0.8
13. Basic Issue Items	16	1	0.0	120	Various	0.7	120	Various	0.7
14. MILSTRIPS/RIK	16	1	0.0	120	Jun 98	1.1	120	Apr 99	1.1
15. VIS	20	1	0.7	120	Jan 98	84.3	120	Dec 98	80.1
26. II Gen FLIR									
<b>Total Advance Procurement</b>						253.5			262.9
Description: * PLT excludes First Article Test (FAT) or other special test requirements for new producers or other factors. ALT is based on current long term contracts. ALT increase with new starts/new contractors/new contracts. PLT includes the 6 months requirement for components prior to tank delivery.									

Advance Procurement Requirements Analysis-Present Value Analysis (P-10C)												
Appropriation / Budget Activity/Serial No: <span style="float:right">Date: February 1998</span>												
PROCUREMENT OF WPNS & TRKD CMBT VEHs / 1 / Tracked Combat Vehicles <span style="float:right">P-1 Line Item Nomenclature / Weapon System: ABRAMS UPGRADE PROGRAM (ADV PROG) (GA0750)</span>												
	Pr Yrs	1995	1996	1997	1998	1999	2000	2001	2002	2003	To Comp	Total
(\$ in Millions)												
Proposal w/o AP												
Then Year Cost	658	132	440	501	587	666	668	630	596	675	344	5897
Constant Year Cost	692	136	447	502	578	651	642	595	552	613	303	5711
Present Value	762	146	466	509	571	625	599	540	488	527	251	5482
AP Proposal												
Then Year Cost	692	280	556	462	582	676	647	541	586	531	344	5897
Constant Year Cost	753	289	564	463	574	660	622	511	543	482	303	5764
Present Value	871	310	588	469	566	634	581	464	480	414	251	5626
AP Savings (Difference)												
Then Year Cost	34	148	116	-39	-5	9	-20	-89	-9	-144		
Constant Year Cost	61	153	118	-39	-5	9	-20	-84	-9	-131		53
Present Value	109	164	123	-40	-5	9	-18	-76	-8	-113		145
Remarks:												

Advance Procurement Requirements Analysis-Execution (P-10D)										Date: February 1998	
Appropriation / Budget Activity/Serial No:										P-1 Line Item Nomenclature / Weapon System:	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles										ABRAMS UPGRADE PROGRAM (ADV PROC) (GA0750)	
(\$ in Millions)											
End Item	PLT (mos)	1996			1997			1998			1999
		Qty	Contract Forecast Date	Actual Contract Date	Total Cost Request	Actual Contract Cost	Contract Forecast Date	Actual Contract Cost	Contract Forecast Date	Actual Contract Cost	Contract Forecast Date
1. Basic Vehicle	18	120	Various	Various	193.0	193	Various	Various	Various	142.8	Various
2. Armor	19	122	Mar-96	Mar-96	7.9	8	Mar-97	Feb-97	Various	9.8	Various
3. H/TEU	20	240	May-96	May-96	7.2	7	Mar-97	Mar-97	Jan-98	6.7	Jan-98
4. Engine (DECU)	19	120	Mar-96	Mar-96	2.5	3	Mar-97	Apr-97	Jan-98	3.1	Dec-98
5. Transmission	19	120	Dec-95	Various	22.4	22	Dec-96	Sep-97	Feb-98	23.4	Jan-98
6. Final Drives	16	240	Mar-96	Nov-95	1.5	1	Mar-97	Jan-97	Apr-98	1.4	Apr-99
7. Fire Control	16	120	Various	Various	39.3	39	Various	Various	Various	38.8	Various
8. Track	19	18720	Mar-96	Mar-96	5.7	6	Mar-97	Nov-96	Apr-98	5.7	Nov-98
9. Roadwheels	16	3840	Mar-96	Mar-96	1.4	1	Mar-97	Dec-96	Apr-98	1.4	Apr-99
10. Gun Mounts	16	60	Mar-96	Mar-96	2.1	2	Mar-97	Feb-97	Apr-98	2.6	Apr-99
11. Gun	16	120	Apr-96	Apr-96	11.4	11	Mar-97	Mar-97	Apr-98	10.6	Apr-99
12. Driver's Night Viewer	13	120	Apr-96	Jun-96	0.6	1	Jul-97	Sep-97	Jul-98	0.6	Jul-99
13. Basic Issue Items	16	120	Mar-96	May-96	0.8	1	May-97	Feb-97	Apr-98	0.7	Apr-99
14. MILSTRIPS/RIK	16	120	Various	Various	0.5	0	Various	Various	Various	0.5	Various
15. VIS	16	120	Apr-96	May-96	1.0	1	Apr-97	Apr-97	Jun-98	1.0	Apr-99
26. II Gen FLIR	20						Feb-97	Apr-97	Jan-98	9.0	Dec-98
<b>Total Advance Procurement</b>					297.2	297.2				258.2	

Description:

\* PLT excludes First Article Test (FAT) or other special test requirements for new producers or other factors. ALT is based on current long term contracts. ALT increase with new starts/new contractors/new contracts.

Advance Procurement Requirements Analysis-Obligations/Expenditures (P-10E)														February 1998			
Appropriation / Budget Activity/Serial No:														Date:			
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles														P-1 Line Item Nomenclature / Weapon System:			
ABRAMS UPGRADE PROGRAM (ADV PROC) (GA0750)																	
(\$ in Millions)																	
	Total Program	1995				FY 96							Total Obl/Exp (Cum)	Ending Balance (Cum)			
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug			Sep		
FY 96																	
Obl Plan	297.2															297.2	.0
Actual	297.2	1.1	23.5	28.8	4.6	37.0	15.3	12.0	1.3	168.4	5.2	65.4	29.3	267.9	285.4	297.2	29.3
Exp Plan	297.2	1.1	23.5	28.8	4.6	33.6	17.0	8.2	.8	.8	5.1	7.0	11.8	284.1	285.4	297.2	285.4
Actual	297.2						.4	.4	.8	4.5			13.1	284.1	284.1	297.2	284.1
FY 97																	
Obl Plan	258.2															258.2	258.2
Actual	258.2															258.2	258.2
Exp Plan	258.2															258.2	258.2
Actual	258.2															258.2	258.2
FY 98																	
Obl Plan	253.5															253.5	253.5
FY 99																	
Obl Plan	262.9															262.9	262.9
Narrative:																	

Advance Procurement Requirements Analysis-Obligations/Expenditures (P-10E)															
Appropriation / Budget Activity/Serial No:												Date:			
P-1 Line Item Nomenclature / Weapon System:												February 1998			
ABRAMS UPGRADE PROGRAM (ADV PROC) (GA0750)															
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles															
(\$ in Millions)															
	Starting Balance	1996			FY 97							Total Obl/Exp (Cum)	Ending Balance (Cum)		
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul			Aug	Sep
FY 96															
Obl Plan	.0														.0
Actual	29.3			1.0	11.2	11.9		-1.9	-7	7.8				29.3	.0
Exp Plan	285.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.5	9.5	9.4	9.4	113.0	172.4
Actual	284.1	5.0	8.3	2.9	3.0	15.1	6.5	24.5	12.9	13.3	19.0	14.2	6.1	130.8	153.3
FY 97															
Obl Plan	258.2														.0
Actual	258.2		5.7	10.7	7.1	46.1	25.1	33.4	3.5	6.0	39.2	42.4	39.0	258.2	258.2
			5.7	10.7	33.1	41.0	20.4	12.5	2.6		.2	69.0	61.3	256.5	1.7
Exp Plan	258.2				2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	18.2	240.0
Actual	258.2				2.0	.2	.7	2.0	1.2	2.8	5.4	1.1	3.1	14.5	243.7
FY 98															253.5
Obl Plan	253.5														
FY 99															262.9
Obl Plan	262.9														
Narrative:															

Advance Procurement Requirements Analysis-Obligations/Expenditures (P-10E)															
Procurement of WPNS & TRKD CMBT VEHs / 1 / Tracked Combat Vehicles										Date: February 1998					
Appropriation / Budget Activity/Serial No:										P-1 Line Item Nomenclature / Weapon System: ABRAMS UPGRADE PROGRAM (ADV PROC) (GA0750)					
(\$ in Millions)															
	Starting Balance	1997			FY 98					Total Obl/Exp (Cum)	Ending Balance (Cum)				
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May			Jun	Jul	Aug	Sep
FY 96															
Obl Plan	.0			.0										.0	.0
Actual														.0	.0
Exp Plan	172.4	8.6	8.6	8.6	8.6	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	104.0	68.4
Actual	159.4	11.7	29.2	13.1										54.0	105.4
FY 97															
Obl Plan	.0													.0	.0
Actual	1.7	.0	1.4											1.5	.2
Exp Plan	240.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	96.0	144.0
Actual	246.8	3.0	7.8	11.5										22.2	224.5
FY 98															
Obl Plan	253.5				174.1	23.6		29.0	8.0	2.0	1.1	13.8	1.9	253.5	.0
FY 99															
Obl Plan	262.9														262.9
Narrative:															

Advance Procurement Requirements Analysis-Obligations/Expenditures (P-10E)															
Appropriation / Budget Activity/Serial No:										Date: February 1998					
PROCUREMENT OF WPNS & TRKD CMBT VEHs / 1 / Tracked Combat Vehicles										P-1 Line Item Nomenclature / Weapon System: ABRAMS UPGRADE PROGRAM (ADV PROG) (GA0750)					
(\$ in Millions)															
	Starting Balance	1998					FY 99					Total Obl/Exp (Cum)	Ending Balance (Cum)		
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul			Aug	Sep
FY 96	.0														.0
Obl Plan															
Actual															
Exp Plan	68.4	2.8	2.9	2.8	2.8	2.8	2.8	2.9	2.8	2.9	2.9	2.9	2.9	34.2	34.2
Actual	159.4														159.4
FY 97	.0														.0
Obl Plan															
Actual	63.0														63.0
Exp Plan	144.0	7.3	7.4	7.3	7.3	7.3	7.3	7.3	7.4	7.3	7.4	7.4	7.4	88.1	55.9
Actual	246.8														246.8
FY 98	.0														.0
Obl Plan															
Actual															
Exp Plan															
Actual															
FY 99	262.9		5.8	77.6	140.2			19.6	1.4	3.7	.6	11.8	2.2	262.9	.0
Obl Plan															
Actual															
Exp Plan															
Actual															
Narrative:															

Advance Procurement Requirements Analysis-Obligations/Expenditures (P-10E)															
Appropriation / Budget Activity/Serial No:										Date: February 1998					
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles										P-1 Line Item Nomenclature / Weapon System: ABRAMS UPGRADE PROGRAM (ADV PROCG) (GA0750)					
(\$ in Millions)															
	Starting Balance	FY 99					FY 00					Total Obl/Exp (Cum)	Ending Balance (Cum)		
		1999					2000								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul			Aug	Sep
FY 96															
Obl Plan	.0														.0
Actual															
Exp Plan	34.2	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	17.2	17.0
Actual	159.4														159.4
FY 97															
Obl Plan	.0														.0
Actual	63.0														63.0
Exp Plan	55.9	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	28.2	27.7
Actual	246.8														246.8
FY 98															
Obl Plan	.0														.0
FY 99															
Obl Plan															
Narrative:															



Advance Procurement Requirements Analysis-Obligations/Expenditures (P-10E)																	
Appropriation / Budget Activity/Serial No:										Date: February 1998							
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles										P-1 Line Item Nomenclature / Weapon System: ABRAMS UPGRADE PROGRAM (ADV PROC) (GA0750)							
	Starting Balance	FY 01 (\$ in Millions)											Total Obl/Exp (Cum)	Ending Balance (Cum)			
		2000					2001										
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug			Sep		
FY 96	.0																
Obl Plan																	
Actual																	.0
Exp Plan	17.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.8	1.7	17.0		.0
Actual	159.4														159.4		159.4
FY 97	.0																
Obl Plan																	.0
Actual	63.0														63.0		63.0
Exp Plan	27.7	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	15.6		12.1
Actual	246.8														246.8		246.8
FY 98	.0																.0
Obl Plan																	
FY 99																	
Obl Plan																	
Narrative:																	

Advance Procurement Requirements Analysis-Obligations/Expenditures (P-10E)																
Appropriation / Budget Activity/Serial No:										Date: February 1998						
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles										P-1 Line Item Nomenclature / Weapon System: ABRAMS UPGRADE PROGRAM (ADV PROC) (GA0750)						
(\$ in Millions)																
	Starting Balance	FY 02												Total Obl/Exp (Cum)	Ending Balance (Cum)	
		2001					2002									
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
FY 96																
Obl Plan	.0															.0
Actual																.0
Exp Plan	.0															.0
Actual	159.4															159.4
FY 97																
Obl Plan	.0															.0
Actual	63.0															63.0
Exp Plan	12.1															.0
Actual	246.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.0		12.1	246.8
FY 98																
Obl Plan	.0															.0
FY 99																
Obl Plan																
Narrative:																

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
PROCUREMENT OF WPNS & TRKD CMBT VEHs / 1 / Tracked Combat Vehicles												P-1 Item Nomenclature:
Program Elements for Code B Items:												ITEMS LESS THAN \$2.0M (TCV-WTCV) (GL3100)
Code:												Other Related Program Elements:
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	17.5	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.0	18.3
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	17.5	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.0	18.3
Initial Spares												
Total Proc Cost	17.5	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.0	18.3
Flyaway U/C												
Wpn Sys Proc U/C												
<p><b>DESCRIPTION:</b> Provides for procurement/assembly of full tracked vehicle organizational maintenance tool/shop sets. This equipment has multi-applications and is essential for effective maintenance on all tracked vehicles.</p> <p><b>JUSTIFICATION:</b> Required to provide organizational maintenance personnel with equipment essential to maintain full tracked vehicles in an acceptable state of readiness. Funding of this program will establish and maintain the operational capability of the Bradley Fighting Vehicle, M1 Tank, etc.</p>												

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles				P-1 Line Item Nomenclature: ITEMS LESS THAN \$2.0M (TCV-WTCV) (GL3100)				Weapon System Type:		Date: February 1998	
WTCV Cost Elements			FY 96		FY 97		FY 98		FY 99					
ID	CD		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
1. Shop Set, Contact and Emergency Repair, FM		G352	11	1	11	11	1	11	44	3	15	33	3	11
2. Tool Set, Full Tracked Vehicle, Org Maint, Sup 2		G649							92	7	13	90	7	13
3. Shop Equip, Contact Repair Shop, Light Vhl Mtd		G314										9	1	9
TOTAL			11			11			136			132		



Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles				P-1 Line Item Nomenclature: PRODUCTION BASE SUPPORT (TCV- WTCV) (GA0050)				Weapon System Type:		Date: February 1998		
WTCV			FY 96		FY 97		FY 98		FY 99						
Cost Elements			ID	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			CD	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
49X3002 Omnibus Design Provided for design of construction/equip projects in support of Tank production.				\$0.394											
49X4281 LIF, Layaway/Redistribution Various Government & Contractor Facilities Provides for plant clearance and restoration of those areas no longer required for active production. Packing, crating, handling & transportation GFE retained for future prod.				\$0.432			\$0.360			\$0.357			\$0.350		
49X6037 PSR, LIMA Army Tank Plant (LATP) Provides non-routine maintenance of real property facilities, I.P.E. purchase & rehab. of production equipment				\$2.299			\$4.427			\$5.626			\$4.000		
49X6040 PSR, Scranton/Muskegon Facilities Provides replacement/rehab of Government owned equipment at contractor plants.				\$0.750			\$4.499			\$2.775			\$3.711		
49X6042 PSR, LIMA Army Tank Plant (LATP) Provides elimination of buildings/restoring sites to ensure comp w/Pollution Prevention Executive Order 12856.													\$0.304		
49X6047 PSR, LIMA Army Tank Plant (LATP) Provides compliance with Ohio Dept. of Trans. resurfacing cycle-asphaltic/concrete													\$0.218		
49X6048 PSR, LIMA Army Tank Plant (LATP) Provides for roof/downspout replacement													\$0.278		
19X8173 ENV, Stratford Army Engine Plant Provided for correction of OSHA/EPA deficien- cies/minimum facility project in support of the aircraft and tank production.				\$1.448											
TOTAL				\$5.323			\$9.286			\$8.758			\$8.861		

Exhibit P-40, Budget Item Justification Sheet										Date:	February 1998	
Appropriation / Budget Activity/Serial No:										P-1 Item Nomenclature:		
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles										ARMOR MACHINE GUN, 7.62MM M240 SERIES (G13000)		
Program Elements for Code B Items:										Other Related Program Elements:		
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty				2034	1500	673	2154	1746				8107
Gross Cost	0.0	0.0	0.0	20.3	14.7	6.5	18.4	17.8	0.0	0.0	0.0	77.7
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)		0.0	0.0	20.3	14.7	6.5	18.4	17.8	0.0	0.0	0.0	77.7
Initial Spares												
Total Proc Cost	0.0	0.0	0.0	20.3	14.7	6.5	18.4	17.8	0.0	0.0	0.0	77.7
Flyaway U/C												
Wpn Sys Proc U/C												
<p><b>DESCRIPTION:</b> The M240B Machine Gun is a ground version of the M240 Machine Gun, the 7.62mm Medium Machine Gun class weapon designed as a coaxial/pintle-mounted weapon for tanks and light armored vehicles. The M240B is an air cooled, link-belt fed, gas operated weapon. The weapon features fixed head space, which permits rapid changing of the barrels. The principle difference between the M240 and the M240B is the addition of a flash suppressor, front sight, carrying handle for the barrel, buttstock, pistol grip, bipod, heat shield and rear sight assembly. The M240B Machine Gun may also be tripod-mounted and used in conjunction with a traversing and elevating mechanism and a flex mount pintle.</p> <p><b>JUSTIFICATION:</b> The M240B Medium Machine Gun is an infantry version of the M240 Armored Machine Gun intended to replace the M60 Series Machine Gun in light infantry, mechanized infantry, and combat engineer units. The US Army has identified a need to upgrade its current inventory of 7.62mm Medium Machine Guns in order to provide the dismounted infantryman a more reliable, accurate, and lethal medium machine gun to suppress and destroy enemy personnel, lightly armored vehicles, and fortified positions.</p>												

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat			P-1 Line Item Nomenclature: ARMOR MACHINE GUN, 7.62MM M240 SERIES (G13000)			Weapon System Type:			Date: February 1998		
WTCV Cost Elements	ID	CD	FY 96			FY 97			FY 98			FY 99		
			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
1. Hardware (Incls Flex Mount & Blank Firing Device)	A		17102	2034	8	13594	1500	9	5623	673	8			
2. Engineering Support - In House Support			1553			450			262					
3. Quality Assurance (ARDEC)			117			63			41					
4. Integrated Logistics Support			79			79			61					
5. Engineering Studies			589											
6. Engineering Change Proposals			428			342			140					
7. Testing (TECOM)			423						90					
8. Fielding						164			279					
TOTAL			20291			14692			6496					



Exhibit P-5a, Budget Procurement History and Planning										Date: February 1988
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles			Weapon System Type:		P-1 Line Item Nomenclature: ARMOR MACHINE GUN, 7.62MM M240 SERIES (G13000)					
WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
Hardware (Incls Flex Mount & Blank Firing Device)										
FY 97	FN Manufacturing, Inc., Columbia, SC	SS/FFP M-3(1)	ACALA	Sep-97	Mar-98	2034	8	Yes	No	
FY 98	FN Manufacturing, Inc., Columbia, SC	SS/FFP M-3(2)	ACALA	Apr-98	Oct-99	673	9	Yes	No	
	FN Manufacturing, Inc., Columbia, SC	SS/FFP M-3(3)	ACALA	Apr-98	Feb-00	827	8	Yes	No	
FY 99	FN Manufacturing, Inc., Columbia, SC	SS/FFP M-3(3)	ACALA	Jan-99	Jul-00	673	8	Yes	No	
<b>REMARKS:</b> The M240 contract was established as a 3-year multiyear contract (FY97,99,00). FY98 Congressional funding will be used to exercise the 2nd and part of the 3rd years of the multiyear contract.										







Exhibit P-40, Budget Item Justification Sheet										Date:	February 1998	
Appropriation / Budget Activity/Serial No:  PROCUREMENT OF WPNS & TRKD CMBT VEHIS / 2 / Weapons and Other Combat Vehicles			P-1 Item Nomenclature:  MACHINE GUN, 5.56MM (SAW) (G12900)									
Program Elements for Code B Items:			Other Related Program Elements:									
			Code:		A							
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty	48002	8705	9430	3802	406	1525						71870
Gross Cost	117.2	21.1	27.5	12.1	5.5	4.5	0.0	0.0	0.0	0.0	0.0	187.9
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	117.2	21.1	27.5	12.1	5.5	4.5	0.0	0.0	0.0	0.0	0.0	187.9
Initial Spares												
Total Proc Cost	117.2	21.1	27.5	12.1	5.5	4.5	0.0	0.0	0.0	0.0	0.0	187.9
Flyaway U/C												
Wpn Sys Proc U/C												
<p><b>DESCRIPTION:</b> The Squad Automatic Weapon (SAW) is a lightweight (22 pounds with 200 rounds of ammunition), 5.56mm, one-man operated weapon capable of delivering a sustained volume of automatic, accurate, and lethal fire at ranges of up to 800 meters. The Army configuration was changed Oct 89 to include a spare barrel, additional heat shield and barrel bag.</p> <p><b>JUSTIFICATION:</b> The sustained fire capability and increased range are urgently needed throughout infantry rifle squads in order to enhance their survivability. This lightweight, highly mobile machine gun will be used by infantry, light infantry, airborne infantry, mechanized infantry and elements of the air cavalry units, as well as non-infantry units. This procurement profile will equip selected elements of the above mentioned units on a priority basis.</p>												

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat				P-1 Line Item Nomenclature: MACHINE GUN, 5.56MM (SAW) (G12900)				Weapon System Type:		Date: February 1998	
WTCV Cost Elements			FY 96		FY 97		FY 98		FY 99					
ID	CD		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
1. Hardware	A		24817	9430	3	10006	3802	3	1068	406	3	4185	1525	3
2. GFM			626			186			8					
3. Engineering Support - In House Support			134			145			341			78		
4. Quality Assurance (ARDEC)						65			89			21		
5. Testing (TECOM)			115			101			100			60		
6. Engineering Change Proposal (ECP's)						162			2200			10		
7. ILS			65			65			60			40		
8. Fielding			1661			1086			1539			100		
9. TDP Maintenance			58			50			50					
10. Storage						35								
11. Refurbishment			9											
12. Engr Study						149								
TOTAL			27485			12050			5455			4494		

Exhibit P-5a, Budget Procurement History and Planning										Date: February 1998
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles			Weapon System Type:		P-1 Line Item Nomenclature: MACHINE GUN, 5.56MM (SAW) (G12900)					
WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
1. Hardware FY 96	FN Mfg. Co., Inc., Columbia SC	SS/FFP M-3(1)	ACALA	Aug-96	Jan-97	9430	3	Yes	No	
FY 97	FN Mfg. Co., Inc., Columbia SC	SS/FFP M-3(2)	ACALA	Dec-96	Sep-98	3802	3	Yes	No	
FY 98	FN Mfg. Co., Inc., Columbia SC	SS/FFP M-3(3)	ACALA	Dec-98	Jun-99	406	3	Yes	No	
FY 99	FN Mfg. Co., Inc., Columbia SC	SS/FFP	ACALA	Jan-99	Jul-99	1525	3	Yes	No	
REMARKS:										





FY 98 / 99 BUDGET PRODUCTION SCHEDULE										P-1 Item Nomenclature: MACHINE GUN, 5.56MM (SAW) (G12900)										Date: February 1998																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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<b>Exhibit P-40, Budget Item Justification Sheet</b>																							
Appropriation / Budget Activity/Serial No:						Date: February 1998																	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles						P-1 Item Nomenclature: GRENADE LAUNCHER, AUTO, 40MM, MK19-3 (G13400)																	
Program Elements for Code B Items:						Other Related Program Elements:																	
Code:		A		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total Prog	
Proc Qty		9666		2100		2100		2150		400		697		1026		649		727		1255		20307	
Gross Cost		147.6		34.0		32.8		33.0		7.8		12.2		18.5		13.8		15.5		25.4		340.6	
Less PY Adv Proc																							
Plus CY Adv Proc																							
Net Proc (P-1)		147.6		34.0		32.8		33.0		7.8		12.2		18.5		13.8		15.5		25.4		340.6	
Initial Spares																							
Total Proc Cost		147.6		34.0		32.8		33.0		7.8		12.2		18.5		13.8		15.5		25.4		340.6	
Flyaway U/C																							
Wpn Sys Proc U/C																							

DESCRIPTION: The MK19, Mod 3 is a self-powered, air-cooled, blowback, 40mm automatic grenade launcher capable of a cyclic rate of 325-375 rounds per minute. It will engage point targets up to 1,500 meters and provide suppressive fire up to 2,200 meters. Component items for this system include the 40mm assembly group 1 and the MK64 mount.

JUSTIFICATION: The weapon will be mounted on the High Mobility Multi-Purpose Wheeled Vehicle (HMMWV), the Armored Personnel Carrier family of vehicles and the M88A1 Recovery Vehicle. During static defensive operations, it will be ground employed utilizing the M3 Tripod Mount. It will replace select M2 cal .50 and M60 7.62mm machine guns in mechanized, light infantry, engineer, military police, and other combat support and combat service support units. Procurement will help reduce critical supply position for high-priority equipment readiness code (ERC) A shortages in Europe, Korea, and CONUS requirements. The MK175 Pedestal Mount is being incorporated on the MK64 Mount to improve the accuracy and dispersion of the MK19-3 when used on the HMMWV application.

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat				P-1 Line Item Nomenclature: GRENADE LAUNCHER, AUTO, 40MM, MK19- 3 (G13400)				Weapon System Type:		Date: February 1998	
WTCV			FY 96		FY 97		FY 98		FY 99					
Cost Elements			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
1. Hardware		A	20237 2039	1500 137	13 15	4433 20876 4065 2107	320 1423 268 139	14 15 15 15	6091	400	15	10609	697	15
2. Round Removal Tool (GFM)			187			209			43			85		
3. Engineering Support - In House			793			660			1032			989		
4. Quality Assurance (ARDEC)			45			30			64			65		
5. Integrated Logistic Support			314			15			127			125		
6. Engineering Change Proposal			103			332			38			125		
7. Testing (TECOM)			406			245			266			183		
8. Fielding									174			10		
9. M175 Material Change (Application Costs)														
10. MK19 Claim			8688											
TOTAL			32812			32972			7835			12191		

Exhibit P-5a, Budget Procurement History and Planning										Date: February 1998
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles		Weapon System Type:		P-1 Line Item Nomenclature: GRENADE LAUNCHER, AUTO, 40MM, MK19-3 (G13400)						
WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Revisn Avail	RFP Issue Date
Hardware										
FY 96	SACO Defense, Saco, Maine	SS/FFP M-2(1) Option	ACALA	Jul-96	May-97	1500	13	Yes	No	
	SACO Defense, Saco, Maine		ACALA	Apr-97	Jul-98	137	15	Yes	No	
FY 97	SACO Defense, Saco, Maine	SS/FFP M-2(2) Option	ACALA	Nov-96	May-98	320	14	Yes	No	
	SACO Defense, Saco, Maine		ACALA	Apr-97	Sep-98	1423	15	Yes	No	
	SACO Defense, Saco, Maine	SS/FFP M-3(1) Option	ACALA	Sep-97	Oct-99	268	15	Yes	No	
	SACO Defense, Saco, Maine		ACALA	Jun-98	Jan-00	139	15	Yes	No	
FY 98	SACO Defense, Saco, Maine	Option	ACALA	Jun-98	Feb-00	400	15	Yes	No	
FY 99	SACO Defense, Saco, Maine	SS/FFP M-3(2)	ACALA	Dec-98	Jun-00	697	15	Yes	No	
REMARKS:										











Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998	
Appropriation / Budget Activity/Serial No:										P-1 Item Nomenclature:				
PROCUREMENT OF WPNS & TRKD CMBT VEHIS / 2 / Weapons and Other Combat Vehicles										M16 RIFLE (G14900)				
Program Elements for Code B Items:										Other Related Program Elements:				
Code: A														
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog		
Proc Qty	490368	20473	31826	15583	11297	16067	22848	7472				615934		
Gross Cost	224.5	9.8	13.1	6.5	5.0	6.8	9.8	4.9	0.0	0.0	0.0	280.4		
Less PY Adv Proc														
Plus CY Adv Proc														
Net Proc (P-1)	224.5	9.8	13.1	6.5	5.0	6.8	9.8	4.9	0.0	0.0	0.0	280.4		
Initial Spares														
Total Proc Cost	224.5	9.8	13.1	6.5	5.0	6.8	9.8	4.9	0.0	0.0	0.0	280.4		
Flyaway U/C														
Wpn Sys Proc U/C														

**DESCRIPTION:** The M16A2 Rifle, 5.56mm, is a gas operated, air cooled, magazine fed, selective rate shoulder fired weapon. It is fed by a 30 round aluminum magazine and is designed for use as the primary infantry weapon. The M16A2 is an improved version of the M16A1 Rifle. Improvements include: strengthened plastic handguard, rifle stock and pistol grip to increase durability of the weapon, interchangeable handguard halves, muzzle brake compensator which reduces the raise or jump of the muzzle when fired, a burst control device limiting the automatic fire to a maximum of three rounds per trigger pull, and adjustable rear sight and square front sight post for a more distinct sight picture, a brass deflector to prevent hot brass cartridge casings from hitting left-handed shooters, and a stronger barrel reinforced with additional metal and a change in the twist ratio of the bore to accommodate NATO standard 5.56mm ammunition. The maximum effective range of the M16A2 has increased from 460 to 550 meters.

**JUSTIFICATION:** The M16A2 Rifle Program for FY99 provides additional rifles for fielding against the Force Modernization requirement for pure fleeing the field with the M16A2 Rifle. Without additional M16A2 Rifles, a logistic problem associated with different ammunition requirements for the M16A1 vs M16A2 is perpetuated. Funding also supports the M16 Rifle Industrial Base.

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKO CMBT VEHS / 2 / Weapons and Other Combat			P-1 Line Item Nomenclature: M18 RIFLE (G14900)			Weapon System Type:			Date: February 1998		
WTCV Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$	\$000	Each	\$	\$000	Each	\$	\$000	Each	\$
1. Rifle (Includes Slings and Magazines)	A		12667	31813	398	4109	10320	398	4499	11297	398	6397	16067	398
Refurbished Rifles						616	1548	398						
2. Engineering Support - In House Support			3	13	231	1480	3715	398						
3. Engineering Change Proposals			8						266			256		
4. Quality Assurance (ARDEC)			47						63			92		
5. Integrated Logistics Support			65						63			54		
6. Testing (TECOM)			131						74					
7. Fielding			133						19			30		
<b>TOTAL</b>			13054			6523			4984			6829		

Exhibit P-5a, Budget Procurement History and Planning										Date:	February 1998
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles		Weapon System Type:		P-1 Line Item Nomenclature: M16 RIFLE (G14900)							
WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$	Specs Avail Now?	Date Revisn Avail	RFP Issue Date	
1. Rifle (Includes Slings and Magazines) FY 96	FN Mfg. Co., Inc. Columbia, SC	SS/FFP M-5(1)	ACALA	Aug-96	Jan-97	31813	398	Yes	No		
	FN Mfg. Co., Inc. Columbia, SC	SS/FFP M-5(1)	ACALA	Aug-96	Jan-97	13	231	Yes	No		
FY 97	FN Mfg. Co., Inc. Columbia, SC	SS/FFP M-5(2)	ACALA	Dec-96	Jan-99	10320	398	Yes	No		
	FN Mfg. Co., Inc. Columbia, SC	Option	ACALA	Dec-96	Aug-99	1548	398	Yes	No		
	FN Mfg. Co., Inc. Columbia, SC	Option	ACALA	Aug-97	Sep-99	3715	398	Yes	No		
FY 98	FN Mfg. Co., Inc. Columbia, SC	SS/FFP M-5(3)	ACALA	Jan-98	Dec-99	11297	398	Yes	No		
FY 99	FN Mfg. Co., Inc. Columbia, SC	SS/FFP M-5(4)	ACALA	Jan-99	Jul-00	16067	398	Yes	No		
REMARKS:											

FY 98 / 99 BUDGET PRODUCTION SCHEDULE													M16 RIFLE (G14900)										Date:		February 1998																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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Exhibit P-40, Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles						Date: February 1998						
P-1 Item Nomenclature: 5.56 CARBINE M4 (G14904)												
Program Elements for Code B Items:						Other Related Program Elements:						
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty	41582	15892	9785	10803	7484	6310	8687	8309				108652
Gross Cost	20.9	10.8	6.3	6.5	5.0	4.2	5.4	5.3	0.0	0.0	0.0	64.4
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	20.9	10.8	6.3	6.5	5.0	4.2	5.4	5.3	0.0	0.0	0.0	64.4
Initial Spares												
Total Proc Cost	20.9	10.8	6.3	6.5	5.0	4.2	5.4	5.3	0.0	0.0	0.0	64.4
Flyaway U/C												
Wpn Sys Proc U/C												

**DESCRIPTION:** The M4 Carbine is a 5.56mm gas-operated, air-cooled, magazine-fed, selective-rate, shoulder-fired weapon. It is fed by a 30-round magazine and will replace all M3A1 WWII era .45 cal Submachine guns, and selective M16 series rifles and M9 pistols. It provides the individual soldier operating in close quarters the capability to engage targets at extended ranges with accurate lethal fire. Although more compact and featuring a collapsible stock, it achieves over 85% commonality with the M16A2 rifle. The effective range is 500 meters.

**JUSTIFICATION:** The M4 Carbine will provide soldiers with a compact, light-weight weapon that can provide better self protection and additional firepower in close quarters. The FY99 program will allow for the uninterrupted fielding of the M4 Carbine to Army units. Procurement is necessary to achieve the Army Acquisition Objective (AAO) for the M4 Carbine.

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat			P-1 Line Item Nomenclature: 5.56 CARBINE M4 (G14904)			Weapon System Type:			Date: February 1998		
WTCV			FY 96			FY 97			FY 98			FY 99		
Cost Elements			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
1. Hardware M4 Carbine w/Sling Magazine & Blank Firing Attachment	A		5161	9785	1	5524	10603	1	3899	7484	1	3288	6310	1
2. Engineering Support - In House Support			400			362			425			443		
3. Engineering Change Proposals (ECP's)			59			48			105			85		
4. Quality Assurance (ARDEC)			75			75			75			75		
5. ILS			65						65			65		
6. Engineering Studies			220											
7. Comparison Test (TECOM)						175			151					
8. Fielding			312			339			264			274		
<b>TOTAL</b>			<b>6292</b>			<b>6523</b>			<b>4984</b>			<b>4230</b>		



Exhibit P-5a, Budget Procurement History and Planning										Date:	February 1998
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles		Weapon System Type:		P-1 Line Item Nomenclature: 5.56 CARBINE M4 (G14904)							
WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$000	Specs Avail Now?	Date Reven Avail	RFP Issue Date	
1. Hardware FY 96	Colt's Mfg Co., Inc. Hartford, CT	SS/FFP M-4(1)	ACALA	Oct-97	Jun-98	6000	1	Yes	No		
	Colt's Mfg Co., Inc. Hartford, CT	SS/FFP	ACALA	Mar-98	Oct-98	3785	1	Yes	No		
FY 97	Colt's Mfg Co., Inc. Hartford, CT	SS/FFP	ACALA	Mar-98	Apr-99	10603	1	Yes	No		
FY 98	Colt's Mfg Co., Inc. Hartford, CT	SS/FFP M-4(2)	ACALA	Jan-98	Jun-99	6000	1	Yes	No		
	Colt's Mfg Co., Inc. Hartford, CT	SS/FFP	ACALA	Mar-98	Oct-00	1484	1	Yes	No		
FY 99	Colt's Mfg Co., Inc. Hartford, CT	SS/FFP M-4(3)	ACALA	Jan-99	Jun-00	6000	1	Yes	No		
	Colt's Mfg Co., Inc. Hartford, CT	Option/ FY98 SS/FFP	ACALA	Jan-99	Dec-00	310	1	Yes	No		
REMARKS:											



FY 98 / 99 BUDGET PRODUCTION SCHEDULE										P-1 Item Nomenclature: 5.56 CARBINE M4 (G14904)										Date: February 1998									
COST ELEMENTS				M F R		FY		S E R V		PROC QTY Each		ACCEP. PRIOR TO 1 OCT		BAL DUE AS OF 1 OCT															
				1		95&Pr		A		57.5		45.1		12.4															
				1		95&Pr		N		0.9		0.9																	
				1		95&Pr		SDAF		0.5		0.5																	
				1		95&Pr		FMS		0.2		0.2																	
				1		FY96		A		6.0		6.0																	
				1		FY96		N		1.8		1.8																	
				1		FY96		OTH		1.5		1.5																	
				1		FY96		OTH		1.0		1.0																	
				1		FY96		A		3.8		3.8																	
				1		FY97		A		10.6		10.6																	
				1		FY97		N		1.8		1.8																	
				1		FY98		A		6.0		6.0																	
				1		FY98		A		1.5		1.5																	
				1		FY99		A		6.0		6.0																	
				1		FY99		A		0.3		0.3																	







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<b>MODIFICATION TITLE:</b> Close Combat Optics (M4 Carbine) TBD1																																																																																																																																																																																																														
<b>MODELS OF SYSTEMS AFFECTED:</b> M4 Carbine, M68 Sight Reflex																																																																																																																																																																																																														
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The M68 Sight will be installed on the M4 Carbine. The close combat optic allows the soldier to fire a weapon with both eyes open allowing greater awareness of events happening in close proximity. The close combat optic gives the soldier greater hit probability in daylight, low light level, wet weather and other adverse conditions.</p>																																																																																																																																																																																																														
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <b>PLANNED</b>            Development/Operational Test            Type Classification (LRIP)            Production Contract Award            First Production Hardware Delivered            First Unit Equipped         </div> <div style="width: 45%;"> <b>ACCOMPLISHED</b>            1/2Q96            4Q96            4Q96            1Q97              2Q98         </div> </div>																																																																																																																																																																																																														
<b>Installation Schedule:</b> <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td><b>Inputs</b></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td><b>Outputs</b></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td><b>Totals</b></td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th rowspan="2">To Complete</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td><b>Inputs</b></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td><b>Outputs</b></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td><b>Totals</b></td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td></td> </tr> </tbody> </table>															Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	<b>Inputs</b>																					<b>Outputs</b>																					<b>Totals</b>	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		FY 2002				FY 2003				FY 2004				FY 2005				To Complete	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	<b>Inputs</b>																		<b>Outputs</b>																		<b>Totals</b>	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
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<b>METHOD OF IMPLEMENTATION:</b> Unit Application <table style="width: 100%;"> <tr> <td style="width: 25%;">Contract Dates:</td> <td style="width: 25%;">FY 1997</td> <td style="width: 25%;">Jul 97</td> <td style="width: 25%;">FY 1998</td> <td style="width: 25%;">Jan 98</td> </tr> <tr> <td>Delivery Date:</td> <td>FY 1997</td> <td>Jul 98</td> <td>FY 1998</td> <td>Mar 99</td> </tr> </table> <table style="width: 100%;"> <tr> <td style="width: 25%;">ADMINISTRATIVE LEADTIME:</td> <td style="width: 25%;">1</td> <td style="width: 25%;">Months</td> <td style="width: 25%;">PRODUCTION LEADTIME:</td> <td style="width: 25%;">6</td> <td style="width: 25%;">Months</td> </tr> <tr> <td></td> <td>FY 1999</td> <td>Jan 99</td> <td></td> <td>FY 1999</td> <td>Jun 99</td> </tr> </table>															Contract Dates:	FY 1997	Jul 97	FY 1998	Jan 98	Delivery Date:	FY 1997	Jul 98	FY 1998	Mar 99	ADMINISTRATIVE LEADTIME:	1	Months	PRODUCTION LEADTIME:	6	Months		FY 1999	Jan 99		FY 1999	Jun 99																																																																																																																																																																										
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	FY 1999	Jan 99		FY 1999	Jun 99																																																																																																																																																																																																									

INDIVIDUAL MODIFICATION													
Close Combat Optics (M4 Carbine) TBD1													
MODIFICATION TITLE (Cont):													
FINANCIAL PLAN: (\$ in Millions)													
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		TOTAL
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
RDT&E		1.469											1.469
PROCUREMENT													
Kit Quantity	3888		14932		4480		12005		20785				56090
Installation Kits													
Installation Kits, Nonrecurring		0.746		2.863		0.859	2.401		5.196				12.065
Equipment													
Equipment, Nonrecurring		0.084		0.140		0.139	0.138		0.115				0.616
Engineering Support		0.050		0.050		0.050	0.050		0.050				0.250
Testing		0.010		0.020		0.020	0.020		0.020				0.090
Integrated Logistical Support		0.010		0.020		0.020	0.020		0.020				0.090
Fielding		0.010		0.020		0.020	0.020		0.020				0.090
Other													
Interim Contractor Support													
Installation of Hardware													
FY 1996 & Prior Eqpt -- Kits					3888								3888
FY 1997 Eqpt -- Kits					511								14932
FY 1998 Eqpt -- Kits							14421						4480
FY 1999 Eqpt -- Kits							4480						12005
FY 2000 Eqpt -- kits							1500		10505				20785
FY 2001 Eqpt -- kits									20785				
FY 2002 Eqpt -- kits													
FY 2003 Eqpt -- kits													
TC Equip-Kits													
Total Installment					4398		20401		31290				56090
Total Procurement Cost		0.9		3.1		1.1	2.6		5.4				13.1



INDIVIDUAL MODIFICATION															Date	February 1998
<b>MODIFICATION TITLE:</b> M203 for M4 Carbine TBD2																
<b>MODELS OF SYSTEMS AFFECTED:</b> M4 Carbine, M4A1																
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The Army units assigned the M4 Carbine will obtain the capability to fire the M203 Grenade Launcher (GL) with the M4 Carbine.</p>																
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>																
										PLANNED			ACCOMPLISHED			
													1Q97 4Q97 4Q97			
													2Q98 3Q98			
<b>Developmental/Operational Tests</b> <b>Type Classification/Milestone III</b> <b>Production Contract Award</b> <b>First Production Hardware Delivered</b> <b>First Unit Equipped</b>																
<b>Installation Schedule:</b>																
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001						
Totals		1	2	3	4	1	2	3	4	1	2	3	4			
Inputs																
Outputs																
Totals																
Inputs																
Outputs																
Totals																
<b>METHOD OF IMPLEMENTATION:</b> Unit Application <b>ADMINISTRATIVE LEADTIME:</b> 9 Months <b>PRODUCTION LEADTIME:</b> 7 Months																
<b>Contract Dates:</b> FY 1997 Sep 97      FY 1998      FY 1999																
<b>Delivery Date:</b> FY 1997 Mar 98      FY 1998      FY 1999																

INDIVIDUAL MODIFICATION														Date		February 1998		
MODIFICATION TITLE (Cont):																		
M203 for M4 Carbine TBD2																		
FINANCIAL PLAN: (\$ In Millions)																		
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
0.631																		0.631
	2576																2576	
		0.222																0.222
		0.070																0.070
		0.040																0.040
		0.030																0.030

INDIVIDUAL MODIFICATION												
										Date	February 1998	
<b>MODIFICATION TITLE:</b> Modular Weapon System (M4 Carbine) TBD3												
<b>MODELS OF SYSTEMS AFFECTED:</b>												
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The modular weapon is a system of mounting rails/methods to allow the custom configuration of M4 Carbines with ancillary items such as optics, night sights, IR laser pointers, the grenade launcher, back-up sights, etc., based upon mission requirements.</p>												
<div style="display: flex; justify-content: space-between;"> <div> <b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>            Developmental/Operational Tests            Milestone III Production Decision            Production Contract Award            First Production Hardware Delivered            First Unit Equipped         </div> <div style="text-align: center;"> <b>PLANNED</b>             3Q98            4Q98         </div> <div style="text-align: center;"> <b>ACCOMPLISHED</b>             3Q95-2Q96            4Q97            4Q97         </div> </div>												
<b>Installation Schedule:</b>												
<b>Inputs</b> <b>Outputs</b>	Pr Yr	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		
	Totals	1	2	3	4	1	2	3	4	1	2	3
<b>Inputs</b> <b>Outputs</b>	FY 2002		FY 2003		FY 2004		FY 2005		To			
	1	2	3	4	1	2	3	4	1	2	3	4
<b>METHOD OF IMPLEMENTATION:</b> Unit Application <b>ADMINISTRATIVE LEADTIME:</b> 6 Months <b>PRODUCTION LEADTIME:</b> 13 Months												
<b>Contract Dates:</b> FY 1997 Aug 97      FY 1998 May 98      FY 1999 Nov 99												
<b>Delivery Date:</b> FY 1997 Apr 98      FY 1998 Oct 99      FY 1999 Dec 00												

INDIVIDUAL MODIFICATION														Date	February 1998			
Modular Weapon System (M4 Carbine) TBD3																		
FINANCIAL PLAN: (\$ in Millions)																		
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
1.158																		1.158
RDT&E																		
PROCUREMENT																		
Kit Quantity	3332		10829		2500												16661	
Installation Kits																		
Installation Kits, Nonrecurring																		
Equipment		0.880		2.761		0.896												4.537
Equipment, Nonrecurring		0.058		0.200		0.125												0.383
Engineering Support		0.020																0.020
Testing		0.015		0.025		0.030												0.070
Integrated Logistical Support		0.025		0.162		0.038												0.225
Fielding																		
Other																		
Interim Contractor Support																		
Installation of Hardware																		
FY 1996 & Prior Eqpt -- Kits																		
FY 1997 Eqpt -- Kits																		
FY 1998 Eqpt -- Kits			2000		1332												3332	
FY 1999 Eqpt -- Kits					8168												10829	
FY 2000 Eqpt -- kits																	2500	
FY 2001 Eqpt -- kits																		
FY 2002 Eqpt -- kits																		
FY 2003 Eqpt -- kits																		
TC Equip-Kits																		
Total Installation			2000		9500		5161										16661	
Total Procurement Cost			1.0		3.1		1.1											5.2

INDIVIDUAL MODIFICATION																																																																																																																																																																																																														
MODIFICATION TITLE: M4 Improved Buttstock TBD4										Date																																																																																																																																																																																																				
MODELS OF SYSTEMS AFFECTED: M4 Carbine, M4A1										February 1998																																																																																																																																																																																																				
<b>DESCRIPTION / JUSTIFICATION:</b>  The M4 Improved Buttstock provides the rifleman with features for obtaining the proper shooting form; stock/shoulder weld and stock/cheek weld.  This program provides the rifleman with an ergonomically optimized buttstock for the M4 Carbine.																																																																																																																																																																																																														
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <b>PLANNED</b>             Finalize Design            Contract Award (Limited Rate)            First Production Hardware Delivered            First Unit Equipped/ECP         </div> <div style="width: 10%; text-align: center;">           2Q98            3Q98            1Q99         </div> <div style="width: 45%;"> <b>ACCOMPLISHED</b>             1Q98         </div> </div>																																																																																																																																																																																																														
<b>Installation Schedule:</b> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>Outputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> </tbody> </table> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th rowspan="2">To Complete</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </thead> <tbody> <tr> <td>Inputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td> </tr> <tr> <td>Outputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td> </tr> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td></td> </tr> </tbody> </table>															Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																					Outputs																						FY 2002				FY 2003				FY 2004				FY 2005				To Complete	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																		Outputs																		Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																																																																																																													
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<b>METHOD OF IMPLEMENTATION:</b> Unit Application Contract Dates: FY 1997 Delivery Date: FY 1997																																																																																																																																																																																																														
<b>ADMINISTRATIVE LEADTIME:</b> 1 Months FY 1998 Feb 98 FY 1998 Apr 98																																																																																																																																																																																																														
<b>PRODUCTION LEADTIME:</b> 6 Months FY 1999 Oct 98 FY 1999 Mar 99																																																																																																																																																																																																														

INDIVIDUAL MODIFICATION														February 1998				
M4 Improved Buttstock TBD4																		
MODIFICATION TITLE (Cont):																		
FINANCIAL PLAN: (\$ in Millions)																		
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
0.377																		
RDT&E																		
PROCUREMENT																		
Kit Quantity			10300		50571												60871	
Installation Kits																		
Installation Kits, Nonrecurring																		
Equipment				0.555		1.381												1.936
Equipment, Nonrecurring				0.065		0.045												0.110
Engineering Support				0.010														0.010
Testing				0.020		0.005												0.025
Integrated Logistical Support																		
Fielding																		
Other																		
Interim Contractor Support																		
Installation of Hardware																		
FY 1996 & Prior Eqpt -- Kits																		
FY 1997 Eqpt -- Kits																		
FY 1998 Eqpt -- Kits																		
FY 1999 Eqpt -- Kits																		
FY 2000 Eqpt -- kits					10300												10300	
FY 2001 Eqpt -- kits					35000												50571	
FY 2002 Eqpt -- kits																		
FY 2003 Eqpt -- kits																		
TC Equip-Kits																		
Total Installment					45300				15571								60871	
Total Procurement Cost						0.7		1.4										2.1

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:												P-1 Item Nomenclature:	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles												M119 MODIFICATIONS (GC0401)	
Program Elements for Code B Items:												Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	0.0	0.0	0.0	0.0	4.9	4.8	2.9	3.2	0.0	0.0	0.0	15.8	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	0.0	0.0	0.0	0.0	4.9	4.8	2.9	3.2	0.0	0.0	0.0	15.8	
Initial Spares													
Total Proc Cost	0.0	0.0	0.0	0.0	4.9	4.8	2.9	3.2	0.0	0.0	0.0	15.8	
Fltaway U/C													
Wpn Sys Proc U/C													
<b>DESCRIPTION:</b> Light Artillery System Improvement Plan (LASIP) for the 105mm, M119A1 Light, Towed Howitzer  <b>JUSTIFICATION:</b> The 105mm M119A1 Light, Towed Howitzer was selected as the weapon of choice for the light forces because it was a nondevelopmental item (NDI) with growth potential. Now that 418 M119A1 howitzers have been fielded, it is time to realize that growth potential. The Light Artillery System Improvement Plan (LASIP) initiates this process by correcting known deficiencies, improving reliability, availability and maintainability (RAM), and providing solutions to requests for minor operational enhancements. The LASIP was developed by the M119A1 Howitzer Improvement Team (HIT), chartered specifically to respond to improvements requested by field artillery units, the U.S. Army Field Artillery School (USAFAS) and the U.S. Army Training and Doctrine Command (TRADOC).													





INDIVIDUAL MODIFICATION																																																																																																																																									
MODIFICATION TITLE: Block 1 Upgrade TBD1										Date																																																																																																																															
MODELS OF SYSTEMS AFFECTED: Howitzer, Light Towed, 105mm M119A1										February 1998																																																																																																																															
<b>DESCRIPTION / JUSTIFICATION:</b> Retrofit Low Temp Recuperator 1-90-05-7875; The seals function only to temperature of -25F not the -50F. Improve Indirect Fire control; Upgrade M187 1-94-05-7911; The M119A1 indirect fire control system fails approximately 14 times more often than other hardware fire control systems when Operational Mode Profile (OMP) is factored in. Upgrade Cam Follower Arm; Preventing damage to the cam follower will improve reliability, availability and maintainability while reducing Operating and Support costs (OSCR). Improve Firing Stays; The design and mounting clearances for the clevis pins on the rear firing stays of the firing platform make it very difficult to attach the stays to the trail during emplacement. Improve Traveling Stays; The design and mounting clearances for the clevis pins on the traveling stays make it very difficult to attach the stays to the trail when preparing for towing Redesign Rammer/Extractor Tool; Modify Brake System; The system required a special production run by the British manufacturer, the brake also used asbestos brake linings. Add Trail Lifting Handles; Due to limited clearance, the user has requested trail lifting handles be designed.																																																																																																																																									
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>																																																																																																																																									
Validate Materiel change (MC) Critical Design Review Complete Testing of Prototype Release Technical Data Package (TDP) Award Contract for Modification Kits				<b>Planned</b> 3Q90 3Q91 3Q92 1Q93 2Q98				<b>Accomplished</b> Deliver First Mod Kit First Unit Equipped (FUE) Deliver Last Mod Kit Last Unit Equipped																																																																																																																																	
<b>Planned</b> 4Q98 <b>Accomplished</b> 1Q99 <b>Accomplished</b> 3Q01 <b>Accomplished</b> 4Q01																																																																																																																																									
<b>Installation Schedule:</b>																																																																																																																																									
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<table border="1"> <thead> <tr> <th colspan="4">FY 2002</th> <th colspan="4">FY 2003</th> <th colspan="4">FY 2004</th> <th colspan="4">FY 2005</th> <th colspan="2">Totals</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>Complete</td> <td>To</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Inputs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Outputs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>425</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>425</td> </tr> </tbody> </table>												FY 2002				FY 2003				FY 2004				FY 2005				Totals		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To																			Inputs																		Outputs																																			425																		425
FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																																																																									
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	To																																																																																																																								
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																	425																																																																																																																								
<b>METHOD OF IMPLEMENTATION:</b> Unit Application Contract Dates: FY 1997 Delivery Date: FY 1997												<b>ADMINISTRATIVE LEADTIME:</b> 4 Months FY 1998 Multiple FY 1998 Multiple		<b>PRODUCTION LEADTIME:</b> 6 Months FY 1999 Multiple FY 1999 Multiple																																																																																																																											

INDIVIDUAL MODIFICATION																				
Block 1 Upgrade TBD1																				
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
					110		125		190								425			
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment						4.219		4.107		2.156									10.482	
Equipment, Nonrecurring						0.026													0.026	
Engineering Change Orders						0.032		0.025		0.025									0.082	
Engineering Support						0.218		0.225		0.235									0.678	
Training Equipment																				
Support Equipment																				
Other						0.304													0.304	
Fielding						0.076		0.111		0.118									0.305	
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installation																				
Total Procurement Cost																				

INDIVIDUAL MODIFICATION										Date	February 1998				
MODIFICATION TITLE: Block 2 Upgrade TBD2															
MODELS OF SYSTEMS AFFECTED:															
DESCRIPTION / JUSTIFICATION:															
<p>The rammer/extractor tool currently issued was "borrowed" from the M102 Howitzer which requires the base of the primed cartridge be forcefully struck by a hard rubber plunger. Upgrade elevating handwheel; it is the limiting factor in the system departure angle during cross country movement and is highly susceptible to damage during tactical operations. These items are included in the "To Complete"(TC): Improve the Direct Fire Scope; Improving the direct fire scope will provide night capability, improved accuracy and internal boresighting. Modify the Firing Platform clamps; The firing platform must be disengaged from its stowage brackets, lifted manually from the trail, carried completely clear of the trail and placed on the ground before the howitzer can be rolled into its firing position. Modify the Elevation Clutches; This will reduce corrosion damage and lower maintenance costs. Replace competitive tubes in the buffer assembly with a more reliable system. This eliminates the collapse of the current tube design.</p>															
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:															
Planned				Accomplished				Planned				Accomplished			
Validate Materiel change (MC)				1Q01				Deliver First Mod Kit				3Q02			
Critical Design Review				2Q01				First Unit Equipped (FUE)				4Q02			
Complete Testing of Prototype				4Q01				Deliver Last Mod Kit				2Q03			
Release Technical Data Package (TDP)				1Q02				Last Unit Equipped				3Q03			
Award Contract for Modification Kits															
Installation Schedule:															
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001					
Totals		1	2	3	4	1	2	3	4	1	2	3	4		
Inputs															
Outputs															
Totals		1	2	3	4	1	2	3	4	1	2	3	4		
Inputs															
Outputs															
Totals		105	110	110	100	100	110	110	100	1	2	3	4		
Inputs															
Outputs															
Totals		425	425												
METHOD OF IMPLEMENTATION: Unit Application															
ADMINISTRATIVE LEADTIME: 6 Months															
PRODUCTION LEADTIME: 6 Months															
Contract Dates: FY 1997															
Delivery Date: FY 1997															



Exhibit P-40, Budget Item Justification Sheet											Date:	February 1998
Appropriation / Budget Activity/Serial No:											P-1 Item Nomenclature:	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles											M16 RIFLE MODS (GZ2800)	
Program Elements for Code B Items:											Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	29.7	1.2	2.8	4.9	4.7	6.2	0.0	0.0	0.0	0.0	0.0	49.5
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	29.7	1.2	2.8	4.9	4.7	6.2	0.0	0.0	0.0	0.0	0.0	49.5
Initial Spares												
Total Proc Cost	29.7	1.2	2.8	4.9	4.7	6.2	0.0	0.0	0.0	0.0	0.0	49.5
Flyaway U/C												
Wpn Sys Proc U/C												

**DESCRIPTION:** The M16 family of rifles is a gas operated, magazine fed, selective fire and shoulder weapon. They are fed by 30 round aluminum magazines. The M16 Rifle Modifications Program provides a close combat optic, a modular weapon system suite, a top carry sling and a permanently affixed, rear aperture, back-up iron sight. The modular weapon allows the custom configuration of the M16 rifles with accessories and smaller items. i.e. optics, night sights, laser pointers, based on mission requirements.

**JUSTIFICATION:** The close combat optic allows the soldier to fire a weapon with both eyes open allowing greater awareness of events happening in close proximity and improves hit probability in daylight, low light level, wet weather and other adverse conditions. The modular weapon system is a key component of Land Warrior Lethality and allows the combat commander to custom configure weapons with accessories (i.e. day/night sights, laser pointers, ancillary weapons, etc.) based upon the mission. The top carry sling maintains the rifle in an upright position freeing the user's hands for other tasks. The permanent back-up, rear aperture, iron sight provides that capability in the event it becomes immediately necessary.

### Exhibit P-40M Budget Item Justification Sheet

Date \_\_\_\_\_

February 1998

**Appropriation / Budget Activity/Serial No.**

### P-1 Item Nomenclature

## PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles

**M16 RIFLE MODS (GZ2800)**

### Program Elements for Code B Items

**Code**

### Other Related Program Elements

Fiscal Years

Description

OSIP NO.	Classification
----------	----------------

Modular Weapon System (M16/M203)

TBD1 Operational

Close Combat Optics (M16)

**Close Combat Ops (WFO)**

**TBD2**

**Operational**

Totals

[illegible]

	Operational	0.0	2.9	1.5	4.5	0.0	0.0	8.9
T8D1								

Close Combat Ontics (M16)

	2.8	4.9	4.7	6.2	0.0	0.0	0.0	18.6
Totals								

INDIVIDUAL MODIFICATION																																																																																															
										Date	February 1998																																																																																				
<b>MODIFICATION TITLE:</b> Modular Weapon System (M16/M203) TBD1																																																																																															
<b>MODELS OF SYSTEMS AFFECTED:</b> Rifle, 5.56mm M16A2																																																																																															
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The modular weapon is a system of mounting rails/methods that allows the custom configuration of M16 Rifles with accessories and ancillary items such as optics, night sights, IR laser pointer, the grenade launcher, back-up sights, etc., based upon mission requirements in the field, without tools.</p>																																																																																															
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>            Developmental/Operational Tests            Milestone III Production Decision            Production Contract Award            First Production Hardware Delivered            First Unit Equipped         </div> <div style="width: 45%; text-align: center;"> <b>PLANNED</b>             3Q98            4Q98         </div> <div style="width: 45%; text-align: center;"> <b>ACCOMPLISHED</b>             3Q95-2Q96            4Q97            4Q97         </div> </div>																																																																																															
<b>Installation Schedule:</b>																																																																																															
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th>Pr Yr</th> <th colspan="4">FY 1997</th> <th colspan="4">FY 1998</th> <th colspan="4">FY 1999</th> <th colspan="4">FY 2000</th> <th colspan="4">FY 2001</th> </tr> <tr> <td>Totals</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>Inputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td>Outputs</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> </table>												Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Inputs																					Outputs																				
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	FY 2002				FY 2003				FY 2004				FY 2005				Totals																																																																														
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Inputs																																																																																															
Outputs																																																																																															
<b>METHOD OF IMPLEMENTATION:</b> Unit Application    ADMINISTRATIVE LEADTIME:    6    Months    PRODUCTION LEADTIME:    12    Months																																																																																															
<b>Contract Dates:</b> FY 1997    Aug 97    FY 1998    May 98    FY 1999    Nov 98																																																																																															
<b>Delivery Date:</b> FY 1997    Apr 98    FY 1998    Oct 98    FY 1999    Oct 99																																																																																															

INDIVIDUAL MODIFICATION																			February 1998	
Modular Weapon System (M16/M203) TBD1																			Date	
MODIFICATION TITLE (Cont):																				
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E		1.158																		1.158
PROCUREMENT																				
Kit Quantity	3143				1612		4380												9135	
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment			2.404		1.487		4.038													7.929
Equipment, Nonrecurring			0.207		0.025		0.215													0.447
Engineering Support			0.100																	0.100
Testing			0.050		0.005		0.075													0.130
Integrated Logistical Support			0.100		0.032		0.180													0.312
Fielding																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits					3000		143												3143	
FY 1998 Eqpt -- Kits							1357		255										1612	
FY 1999 Eqpt -- Kits									4380										4380	
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment			2.9		3000		1500		4635										9135	
Total Procurement Cost								4.5												8.9



INDIVIDUAL MODIFICATION												Date	February 1998																																																																																																								
<b>MODIFICATION TITLE:</b> Close Combat Optics (M16) TBD2																																																																																																																					
<b>MODELS OF SYSTEMS AFFECTED:</b> M16A2 Rifle, M68 Sight Reflex																																																																																																																					
<b>DESCRIPTION / JUSTIFICATION:</b>																																																																																																																					
The M68 Sight will be installed on the M16A2 Rifle																																																																																																																					
The Close Combat Optic allows the soldier to fire his weapon with both eyes open allowing greater awareness of events happening in close proximity to the soldier and improves hit probability in daylight, low light level, wet weather and other adverse conditions.																																																																																																																					
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>																																																																																																																					
<b>PLANNED</b>										<b>ACCOMPLISHED</b>																																																																																																											
Development/Operational Test Type Classification (LRIP) Production Contract Award First Production Hardware Delivered First Unit Equipped										1/2Q96 4Q96 4Q96 1Q97  2Q98																																																																																																											
<b>Installation Schedule:</b>																																																																																																																					
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Pr Yr	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001																																																																																																				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																	
Totals	1																																																																																																																				
Inputs																																																																																																																					
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Totals	FY 2002				FY 2003				FY 2004				FY 2005				To Complete																																																																																																				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																					
Inputs																																																																																																																					
Outputs																																																																																																																					
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<table style="width: 100%;"> <tr> <td style="width: 25%;">FY 1997</td> <td style="width: 25%;">Jul 97</td> <td style="width: 25%;">FY 1998</td> <td style="width: 25%;">Jan 98</td> </tr> <tr> <td>FY 1997</td> <td>Jul 98</td> <td>FY 1998</td> <td>Mar 99</td> </tr> </table>														FY 1997	Jul 97	FY 1998	Jan 98	FY 1997	Jul 98	FY 1998	Mar 99																																																																																																
FY 1997	Jul 97	FY 1998	Jan 98																																																																																																																		
FY 1997	Jul 98	FY 1998	Mar 99																																																																																																																		
<table style="width: 100%;"> <tr> <td style="width: 25%;">FY 1999</td> <td style="width: 25%;">Jan 99</td> <td style="width: 25%;">FY 1999</td> <td style="width: 25%;">Jun 99</td> </tr> <tr> <td>FY 1999</td> <td>Jun 99</td> <td>FY 1999</td> <td>Jun 99</td> </tr> </table>														FY 1999	Jan 99	FY 1999	Jun 99	FY 1999	Jun 99	FY 1999	Jun 99																																																																																																
FY 1999	Jan 99	FY 1999	Jun 99																																																																																																																		
FY 1999	Jun 99	FY 1999	Jun 99																																																																																																																		
<b>PRODUCTION LEADTIME:</b> 6 Months																																																																																																																					

INDIVIDUAL MODIFICATION																			
Close Combat Optics (M16) TBD2																			
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
1.469																			
12090		9361		14840		7520												43811	
																			1.469

Exhibit P-40, Budget Item Justification Sheet										Date:	February 1998	
Appropriation / Budget Activity/Serial No:		P-1 Item Nomenclature:		MODIFICATIONS LESS THAN \$2.0M (WOCV-WTCV (GC0925))								
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles		Other Related Program Elements:										
Program Elements for Code B Items:		Code:										
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	68.3	2.6	1.4	0.6	1.4	1.1	1.0	1.0	1.3	1.3	0.0	80.1
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	68.3	2.6	1.4	0.6	1.4	1.1	1.0	1.0	1.3	1.3	0.0	80.1
Initial Spares												
Total Proc Cost	68.3	2.6	1.4	0.6	1.4	1.1	1.0	1.0	1.3	1.3	0.0	80.1
Flyaway U/C												
Wpn Sys Proc U/C												

**DESCRIPTION:** Provides for modification of Weapons and Other Combat Vehicles with a cost less than \$2.0 Million.

**JUSTIFICATION:** Funds identified in FY97/FY98 will modify the M198 Howitzer and provide machine gun optic sights for the M249, M60 and M240B Machine Guns. The M198 Howitzer will improve the reliability, availability and maintainability (RAM), handling, equilibrator, durability of parts, a reduction in operator fatigue and increased users' satisfaction. The M198 will have the latest enhancements available to service the currently envisioned battlefield. The optic sight will allow the soldier to identify and engage targets more effectively than the existing iron sighting system.



INDIVIDUAL MODIFICATION												Date	February 1998
MODIFICATION TITLE: M198 Howitzer System Improvement TBD1													
MODELS OF SYSTEMS AFFECTED: M198 Howitzer, Medium Towed													
DESCRIPTION / JUSTIFICATION:													
<p>The purpose of the Materiel Change (MC) is to improve the reliability of the M198 System, improve the brake system, reduce operator fatigue, improve the retention of hardware and improve equilibrator adjustment. The areas of improvement were a result of M198 fielded system review. Improvements in ram, handling maneuverability, durability of parts, a reduction in operator fatigue and increased users satisfaction is expected.</p>													
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:													
PLANNED										ACCOMPLISHED			
Production Contract Awarded First Production Hardware Delivered MFA/MWOPF Negotiated First Kit Applied Last Kit Applied Collective Evaluation Completed										1Q91 3Q91 3Q91 3Q91 1Q98 4Q98			
Installation Schedule:													
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001			
		1	2	3	4	1	2	3	4	1	2	3	4
Totals		673	17	17	18	14							
Inputs		673	4	10	17	18	17						
Outputs													
Totals		FY 2002		FY 2003		FY 2004		FY 2005		To			
		1	2	3	4	1	2	3	4	1	2	3	4
Inputs													
Outputs													
Totals													
Inputs													
Outputs													
Totals													
METHOD OF IMPLEMENTATION: Depot													
Contract Dates: FY 1997													
Delivery Date: FY 1997													
ADMINISTRATIVE LEADTIME: Months													
PRODUCTION LEADTIME: Months													
FY 1998													
FY 1999													
FY 1998													
FY 1999													



INDIVIDUAL MODIFICATION											
										Date	February 1998
<b>MODIFICATION TITLE:</b> Machine Gun Optics TBD2											
<b>MODELS OF SYSTEMS AFFECTED:</b> M249 Squad Automatic Weapon; M60 Machine Guns, M240B Machine Guns											
<b>DESCRIPTION / JUSTIFICATION:</b> <p>The Machine Gun Optic Program provides an optic (telescopic) sight for the 5.56mm M249 Light Machine Gun and 7.62mm Medium Machine Guns. The optic sight will allow the soldier to identify and engage targets more effectively than the existing iron sighting system.</p>											
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b>											
				<b>PLANNED</b>				<b>ACCOMPLISHED</b>			
Development/Operational Tests				3Q98							
Type Classification				4Q98							
Production Contract Award				4Q98							
First Production Hardware Delivered				1Q99							
First Unit Equipped				2Q99							
<b>Installation Schedule:</b>											
Pr Yr		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Totals		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4		1 2 3 4	
Inputs											
Outputs											
Totals											
Inputs											
Outputs											
Totals											
<b>METHOD OF IMPLEMENTATION:</b> Unit Application											
Contract Dates:		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
Delivery Date:		Aug 98		Nov 98		Jan 99		Oct 99		Complete	
				ADMINISTRATIVE LEADTIME:		1 Months		PRODUCTION LEADTIME:		10 Months	

INDIVIDUAL MODIFICATION																			
Machine Gun Optics TBD2																			
MODIFICATION TITLE (Cont):																			
FINANCIAL PLAN: (\$ in Millions)																			
FY 1996 and Prior	FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																			
PROCUREMENT																			
Kit Quantity			1718				1378		1214		1191		1626		1625			8752	
Installation Kits																			
Installation Kits, Nonrecurring																			
Equipment					1.117		0.896		0.789		0.774		1.057		1.056				5.689
Equipment, Nonrecurring																			
Engineering Support					0.140		0.143		0.143		0.144		0.144		0.144				0.858
Testing					0.050		0.050		0.050		0.050		0.050		0.050				0.300
Integrated Logistical Support					0.020		0.019		0.020		0.020		0.020		0.020				0.119
Fielding					0.020		0.020		0.020		0.020		0.020		0.020				0.120
Other																			
Interim Contractor Support																			
Installation of Hardware																			
FY 1996 & Prior Eqpt -- Kits																			
FY 1997 Eqpt -- Kits																		1718	
FY 1998 Eqpt -- Kits									368		368							1378	
FY 1999 Eqpt -- Kits								1010			1214							1214	
FY 2000 Eqpt -- kits											218		973		799			1191	
FY 2001 Eqpt -- kits													827		1001			1626	
FY 2002 Eqpt -- kits																		1625	
FY 2003 Eqpt -- kits																			
TC Equip-Kits																			
Total Installation							1350		1378		1800		1800		1800			8752	
Total Procurement Cost						1.3	1.1	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3			7.1	



Exhibit P-40, Budget Item Justification Sheet											Date:	
Appropriation / Budget Activity/Serial No:											February 1998	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles											P-1 Item Nomenclature:	
Program Elements for Code B Items:											ITEMS LESS THAN \$2.0M (WOCV-WTCV) (GL3200)	
Code:											Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	58.0	5.0	1.2	0.9	1.2	1.2	1.2	1.2	1.3	1.3	0.0	72.6
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	58.0	5.0	1.2	0.9	1.2	1.2	1.2	1.2	1.3	1.3	0.0	72.6
Initial Spares												
Total Proc Cost	58.0	5.0	1.2	0.9	1.2	1.2	1.2	1.2	1.3	1.3	0.0	72.6
Flyaway U/C												
Wpn Sys Proc U/C												

**DESCRIPTION:** Provides for procurement and assembly of tool/shop sets, small arms, and gun mounts. The items are needed by maintenance personnel to maintain weapons and combat vehicles, and by Active Army, National Guard, Reserve and ROTC units to perform combat and training missions. The tool/shop equipment has multi-applications and is essential to all levels of weapon and combat vehicle maintenance.

**JUSTIFICATION:** Required to achieve and sustain required levels of readiness to units providing maintenance support to all small arms (M16,9mm Pistol, 7.62 Machine Gun, etc.), artillery (M102,M119,M198 Howitzers, etc.), air defense (Vulcan, PIVAD, etc.) special weapons, and fire control (Tanks, etc.) organizations. Small Arms Weapons and mounts are required to support AAO shortages, field replacements and training requirements.

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKO CMBT VEHS / 2 / Weapons and Other Combat			P-1 Line Item Nomenclature: ITEMS LESS THAN \$2.0M (WOCV-WTCV) (GL3200)			Weapon System Type:			Date: February 1998		
WTCV Cost Elements			FY 96			FY 97			FY 98			FY 99		
ID	CD		TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000	TotalCost \$000	Qty Each	UnitCost \$000
1. Shot Gun, 12 Gage	A	G124	256	256	1	94	410		100	400		100	400	
2. Shop Equip, Small Arms Repair, Shelter Mtd	A	G337				158	4	40				304	8	38
3. Shop Equip, Artillery Maint, FM Set N	A	G348				76	2	38						
4. Tool Set, Instrument and Fire Control FM	A	G371	204	10	20	94	4	24	56	2	28	105	5	21
5. Shop Set, Small Arms, Field Maint, PCS Set D	A	G385	110	2	55	91	2	46	75	1	75			
6. Shop Set, Small Arms FM, Basic	A	G723				14	1	14				14	1	14
7. XM144 Telescope	A		679											
8. Tool Set, Battalion Maint	A	G427				269	67	4	471	70	7	342	86	4
9. Tool Kit, Electronic Sys Maint	A	S380				103	18	6	488	94	5	299	75	4
<b>TOTAL</b>			<b>1249</b>			<b>899</b>			<b>1190</b>			<b>1164</b>		

Exhibit P-40, Budget Item Justification Sheet											Date:	
Appropriation / Budget Activity/Serial No:											February 1998	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles											P-1 Item Nomenclature:	
Program Elements for Code B Items:											PRODUCTION BASE SUPPORT (WOCV-WTCV) (GC0050)	
Code:											Other Related Program Elements:	
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	723.8	10.3	5.9	4.3	6.1	5.1	4.6	4.6	4.9	4.9	0.0	774.5
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	723.8	10.3	5.9	4.3	6.1	5.1	4.6	4.6	4.9	4.9	0.0	774.5
Initial Spares												
Total Proc Cost	723.8	10.3	5.9	4.3	6.1	5.1	4.6	4.6	4.9	4.9	0.0	774.5
Flyaway U/C												
Wpn Sys Proc U/C												

Description: This program provides for Provision of Industrial Facilities (PIF). Funds are used to establish modernize, expand and replace facilities owned by the Army and provide Production Support and Equipment Replacement (PSR) and Modernization (MOD) to Government owned equipment used in production, production testing of Weapons and Tracked Combat Vehicles. Also provides funding for the Layaway of Industrial Facilities (LIF) for preservation of equipment and portions of plants which are no longer required for active production.

Justification: The FY99 request includes essential funding for replacement of equipment & instrumentation in production test facilities at Aberdeen, Yuma Proving Grounds, and White Sands Missile Range (WSMR) and layaway of industrial equipment which is excess to production requirements at Rock Island and Watervliet Arsenals.

	FY 1996	FY 1997	FY 1998	FY 1999
PIF	3,215	2,904	3,489	3,441
LIF	<u>2,640</u>	<u>1,392</u>	<u>2,578</u>	<u>1,699</u>
TOTALS	5,855	4,296	6,067	5,140



Exhibit P-40, Budget Item Justification Sheet												
Appropriation / Budget Activity/Serial No:						Date:		February 1998				
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles						P-1 Item Nomenclature:		INDUSTRIAL PREPAREDNESS (G00075)				
Program Elements for Code B Items:						Code:		Other Related Program Elements:				
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	37.2	6.7	5.3	5.1	5.6	4.0	4.5	4.4	5.1	4.8	0.0	82.5
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	37.2	6.7	5.3	5.1	5.6	4.0	4.5	4.4	5.1	4.8	0.0	82.5
Initial Spares												
Total Proc Cost	37.2	6.7	5.3	5.1	5.6	4.0	4.5	4.4	5.1	4.8	0.0	82.5
Flyaway U/C												
Wpn Sys Proc U/C												
<p><b>DESCRIPTION:</b> This program provides funding to retain, protect, and maintain laidaway reserve industrial plants and equipment. Costs include grounds, utilities, fire and guard protection. Also includes funding for condition assessments of laidaway facilities and costs to rehabilitate equipment to useable condition.</p> <p><b>JUSTIFICATION:</b> The FY99 request supports the equipment and facilities at Rock Island &amp; Watervliet Arsenals. It includes the overhead cost attributed to the laidaway portions of the Arsenal. Funds also support some of the retention, maintenance and the cost for guard protection at the facilities which are not being utilized.</p>												

Exhibit P-5, Weapon WTCV Cost Analysis			Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat			P-1 Line Item Nomenclature: INDUSTRIAL PREPAREDNESS (GC0075)			Weapon System Type:			Date: February 1998		
ID	WTCV	Cost Elements	FY 96			FY 97			FY 98			FY 99		
			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
		49X2100 Plant-Equip Storage, SEAD Provided for storage and maintenance of equipment which was retained at Seneca Army Depot (SEAD) to meet future production requirements.	\$1.049			\$0.108								
		49X4290 Ret & Maintenance - Facilities Provides for storage of equipment for future production at Rock Island and Watervliet Arsenals. Also funds for ground maint., fire and guard protection for inactive portions.	\$2.182			\$2.182			\$2.761			\$0.502		
		69X7670 Ret & Maintenance - Plants/Equip. Provides for overhead costs attributed to laidaway portions of Watervliet & Rock Island Arsenal. Also funds storage and mainten- ance costs of equipment which has been laidaway for future production.	\$2.052			\$2.778			\$2.879			\$3.457		
		<b>TOTAL</b>	\$5.283			\$5.068			\$5.640			\$3.959		

Exhibit P-40, Budget Item Justification Sheet												Date:
Appropriation / Budget Activity/Serial No:												February 1998
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles												P-1 Item Nomenclature:
Program Elements for Code B Items:												SMALL ARMS (SOLDIER ENH PROG) (GC0076)
Code:												Other Related Program Elements:
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	0.0	2.4	5.3	4.1	5.2	5.3	3.6	0.3	2.0	0.0	28.3
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	0.0	2.4	5.3	4.1	5.2	5.3	3.6	0.3	2.0	0.0	28.3
Initial Spares												
Total Proc Cost	0.0	0.0	2.4	5.3	4.1	5.2	5.3	3.6	0.3	2.0	0.0	28.3
Flyaway U/C												
Wpn Sys Proc U/C												

**DESCRIPTION:** This program provides small arms equipment for the soldier, a HMMWV Mount, Dual Mount. The HMMWV Mount provides the soldier with a pedestal and a mount for firing the M249 Squad Automatic Weapon (SAW) and M60 Machine Gun from the M998 HMMWV and a mount for firing the M249 from the M1025/1026 HMMWV. The Dual Mount can be used in both the vehicular (Armament HMMWV) and ground mount application for the MK19 Grenade Machine Gun (GMG) and M2 Heavy Barrel Machine Gun.

**JUSTIFICATION:** Certain applications of the M998 HMMWV require that weapons be displayed and be available quickly for enemy confrontation. The field has devised several non-standard and possibly unsafe methods of mounting weapons on the M998. This program will provide a standard, supportable weapon mount. Military Police and certain infantry units currently mount the M60 Machine Gun on the M1025/1026. As the M60 is replaced by the M249 Machine Gun the need to mount the M249 on the M1025/1026 HMMWV arises. The Dual Mount will be fielded to scout platoons enabling them to install or switch weapons quickly in the event one vehicle goes down. In addition, procurement quantities have been increased to allow fielding to Infantry Anti-Armor and Military Police units. The system corrects the shortcomings of the current MK64 system allowing for bold and accurate traverse and elevation, further range (elevation) for the MK19, recoil attention of the M2 Machine Gun and capability for range card preparation.

Exhibit P-5, Weapon WTCV Cost Analysis				Appropriation/ Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat				P-1 Line Item Nomenclature: SMALL ARMS (SOLDIER ENH PROG) (GC0076)				Weapon System Type:				Date: February 1998			
WTCV Cost Elements				FY 96				FY 97				FY 98				FY 99			
ID	CD	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost			
		\$000	Each	\$	\$000	Each	\$	\$000	Each	\$	\$000	Each	\$	\$000	Each	\$			
1. Hardware		1600	1029	1555	221	103	2146							2731	1241	2201			
MK93 MOD 1 DUAL MOUNT					1300	500	2600												
Dual Mount - New Contract		197	120	1642	1254	660	1900	1583	660	2398									
HMMWV M249 Mount M998 (Quantity)																			
HMMWV Mount M1025/1026 (Quantity)		36	80	450	660	1320	500	583	1740	335	905	2550	355						
MK93 MOD1 (ECP)											390								
2. ESIP		225			459									270					
Dual Mount		117			398			560			250								
HMMWV M249 Mount																			
3. Testing		50			450			550			50			207					
Dual Mount																			
HMMWV M249 Mount																			
4. Integrated Logistics Support		25			20									200					
Dual Mount		47			153			50											
HMMWV M249 Mount		53			293			537											
Materiel Release/Engineering Studies																			
5. Fielding					130			230			230								
HMMWV M249 Mount																			
TOTAL		2350			5338			4093			5233								



Exhibit P-5a, Budget Procurement History and Planning												
Appropriation / Budget Activity/Serial No: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles			Weapon System Type:			P-1 Line Item Nomenclature: SMALL ARMS (SOLDIER ENH PROG) (GC0076)						
WBS Cost Elements: Fiscal Years			Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost \$	Specs Avail Now?	Date Revis Avail	RFP Issue Date
DUAL MOUNT/FY96			Fraser Manufacturing Corp	C/FFP	ACALA	May-96	Jan-98	1029	1555	Yes	Yes	Jan-98
DUAL MOUNT/FY97			Fraser Manufacturing Corp	C/FFP	ACALA	May-97	Jul-98	366	2146			
DUAL MOUNT/FY97 New Contract						Sep-97	Dec-98	500	2600			
HMMWV M249 MOUNT/FY96 M6 Pedestal			Ramo Manufacture Inc. Nashville, Tn	C/FFP	ARDEC	Jul-96	Apr-97	120	1642	Yes	No	
M197			Nautic-All	C/FFP	ARDEC	Aug-96	Mar-97	200	450			
HMMWV M249 MOUNT/FY97 M6 Pedestal			Ramo Manufacture Inc. Nashville, Tn	C/FFP (Option)	ARDEC	Sep-97	Feb-98	660	1900	Yes	No	
M197 Mount			Ma-Tech Inc. Hebron, Va	C/FFP	ARDEC	Sep-97	Feb-98	2005	500			
HMMWV M249 MOUNT/FY98 M6 Pedestal			Ramo Manufacture Inc. Nashville, Tn	C/FFP (Option)	ARDEC	Mar-98	Jan-99	660	2064			
M197 Mount			Ma-Tech Inc, Hebron, Va	SS/BA	ACALA	Jun-98	Dec-98	2400	335			
HMMWV M249 MOUNT/FY99 M197 Mount			Ma-Tech Inc, Hebron, Va	C/FFP	ACALA	Jan-99	Dec-99	2550	355			
Dual Mount/FY99			TBS	C/FFP	ACALA	Jan-99	Jan-00	1241	2201			
REMARKS:												

Exhibit P-40, Budget Item Justification Sheet												Date:	February 1998
Appropriation / Budget Activity/Serial No:		P-1 Item Nomenclature:										SPARES AND REPAIR PARTS (WTCV) (GE0150)	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 3 / Spares and Repair Parts													
Program Elements for Code B Items:		Other Related Program Elements:											
		Code:											
	Prior Years	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Prog	
Proc Qty													
Gross Cost	0.0	0.0	25.9	19.9	20.2	23.2	26.4	27.9	35.3	37.3	0.0	216.1	
Less PY Adv Proc													
Plus CY Adv Proc													
Net Proc (P-1)	0.0	0.0	25.9	19.9	20.2	23.2	26.4	27.9	35.3	37.3	0.0	216.1	
Initial Spares													
Total Proc Cost	0.0	0.0	25.9	19.9	20.2	23.2	26.4	27.9	35.3	37.3	0.0	216.1	
Flyaway U/C													
Wpn Sys Proc U/C													
<b>Description:</b> Provides for procurement of spares to support initial fielding of new or modified end items. <b>Justification:</b> The funds in this account procure depot level repairable (DLRs) secondary items from the Supply Management, Army (SMA) revolving fund (formally Army Stock Fund). To provide initial support, funds are normally required in the same year that end items are fielded. Initial spares breakout:													
<b>System</b>		<b>FY 1996</b>	<b>FY 1997</b>	<b>FY 1998</b>	<b>FY 1999</b>								
GE0161 M1A2		17.1	9.2	13.7	9.8								
GE0163 BFVS		4.9	2.3	.3	7.1								
GE0167 M109		2.4	6.4	3.6									
GE0171 IRV		1.6	2.0	.8	2.9								
GE0173 C2V				.9	2.5								
GE0177 HAB				.9	.9								
<b>Total</b>		25.9	19.9	20.2	23.2								

## **PROCUREMENT OF WEAPONS AND TRACKED COMBAT VEHICLES, ARMY**

### **APPROPRIATION LANGUAGE**

For construction, procurement, production, and modification of weapons and tracked combat vehicles, equipment; including ordnance, spare parts, and accessories therefore: specialized equipment and training devices; expansion of public and private plants, and the land necessary therefore, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes; \$1,433,608 in fiscal year 1999 to remain available for obligation until September 30, 2001.

# **PROCUREMENT OF WEAPONS AND TRACKED COMBAT VEHICLES, ARMY**

## **SECTION 3**

### **COMPARISON OF PROGRAM REQUIREMENTS AND FINANCING**

Comparison of FY1998 program requirements as reflected in the FY1998 Budget Estimate with FY1998 program requirements as shown in the FY1999 Budget Estimates.

Comparison of FY1998 financing as reflected in the FY1998 Budget Estimate with FY1998 financing requirements as shown in the FY1999 Budget Estimates.

Comparison of FY 1997 program requirements as reflected in the FY 1998 Budget Estimate with FY 1997 program requirements as shown in the FY 1999 Budget Estimates.

Comparison of FY1997 financing as reflected in the FY1998 Budget Estimate with FY 1997 program requirements as shown in the FY1999 Budget Estimates.

**COMPARISON OF FY 1998 PROGRAM REQUIREMENTS  
AS REFLECTED IN THE FY 1998 BUDGET ESTIMATE  
WITH THE FY 1998 PROGRAM REQUIREMENTS AS  
SHOWN IN THE FY 1999 BUDGET ESTIMATE  
(In Thousands of Dollars)  
SUMMARY OF REQUIREMENTS (In Thousands of Dollars)**

Appropriation Procurement of Weapons and Tracked Combat Vehicles, Army	FY 1998		FY 1998		Increase (Decrease)
	Requirements Per FY1998	Budget Estimate	Requirements Per FY1999	Budget Estimate	
Activity 1 - Tracked Combat Vehicles	995,854		1,199,918		204,064
Activity 2 - Weapons & Other Combat Vehicles	492,31		70,748		21,517
Activity 3 - Spares and Repair Parts	20,622		20,199		( 423)
<b>TOTAL</b>	<b>1,065,707</b>		<b>1,290,865</b>		<b>225,158</b>

**EXPLANATION BY ACTIVITY**

- Activity 1 - Tracked Combat Vehicles:** The net increase resulted from Congressional adjustments to Bradley Base Sustainment (+\$110,000), FAASV (+\$40,000), Carrier Mods (+\$20,000), Howitzer 155mm (+\$56,000), Improved Recovery Vehicle (+\$4,000), as well as pro rata adjustments for Sections 8043, 8106, 8041 and Congressionally-directed economic assessments (-\$25,936) .
- Activity 2 - Weapons and Other Combat Vehicles:** The increase resulted from Congressional adjustments to Armored Machine Gun (+\$15,000), MK19-3 Grenade Launcher (+\$8,000) as well as pro rata adjustments for Section 8043, 8106, 8041 and Congressionally-directed economic assumptions (-\$1483).
- Activity 3 - Spares and Repair Parts:** The decrease resulted from pro rata adjustments for Section 8043 and 8106 and Congressionally-directed economic assumptions (-\$423)

**COMPARISON OF FY 1998 FINANCING  
AS REFLECTED IN THE FY 1998 BUDGET ESTIMATE  
WITH THE FY 1998 FINANCING AS  
SHOWN IN THE FY 1999 BUDGET ESTIMATE  
(In Thousands of Dollars)**

Appropriation	FY1998		FY1999 Budget Estimate	Increase or (Decrease)
	Financing Per FY1998 Budget Estimate	Financing Per FY1999 Budget Estimate		
Procurement of Weapons and Tracked Combat Vehicles, Army				
Program Requirements (Total)	1,244,707	1,342,565		97,858
Program Requirements (Service Account)	1,065,707	1,290,865		225,158
Program Requirements (Reimbursable)	179,000	51,700		(127,300)
Less:				
Anticipated Reimbursements	(179,000)	(51,700)		(127,300)
<b>BUDGET AUTHORITY</b>				
Appropriation	1,065,707	1,290,865		

**COMPARISON OF FY1997 PROGRAM REQUIREMENTS  
AS REFLECTED IN THE FY1998 BUDGET ESTIMATE  
WITH THE FY1997 PROGRAM REQUIREMENTS AS  
SHOWN IN THE FY1999 BUDGET ESTIMATE  
(In Thousands of Dollars)**

<b>Appropriation Procurement of Weapons and Tracked Combat Vehicles, Army</b>	<b>FY 1997 Requirements Per FY1998 Budget Estimate</b>	<b>FY 1997 Requirements Per FY1999 Budget Estimate</b>	<b>Increase or (Decrease)</b>
<b>Activity 1 - Tracked Combat Vehicles</b>	<b>1,343,772</b>	<b>1,295,042</b>	<b>-48,730</b>
<b>Activity 2 - Weapons and Other Combat Vehicles</b>	<b>104,403</b>	<b>104,130</b>	<b>-273</b>
<b>Activity 3 - Spares and Repair Parts</b>	<b>20,280</b>	<b>19,883</b>	<b>-397</b>
<b>TOTALS</b>	<b>1,468,455</b>	<b>1,419,055</b>	<b>-49,400</b>

**EXPLANATION BY ACTIVITY**

**Activity 1 - Tracked Combat Vehicles -** The decrease resulted from Acquisition Workforce Adjustments (-\$549) , inflation adjustments (-\$4,561) reprogramming of the Armored Combat Earthmover to OPA (-\$50,952), reprogramming of Linebacker from Missiles (+\$7,100) and below threshold reprogrammings (+\$232).

**Activity 2 - Weapons and Other Combat Vehicles -** The decrease resulted from inflation adjustment (-\$367) and below threshold reprogrammings (-\$93).

**Activity 3 - Spares and Repair Parts -** The decrease resulted from inflation adjustment (-\$72) and below threshold reprogrammings (-\$325).

**COMPARISON OF FY1997 FINANCING  
AS REFLECTED IN THE FY1998 BUDGET ESTIMATE  
WITH THE FY1997 FINANCING AS  
SHOWN IN THE FY1999 BUDGET ESTIMATE  
SUMMARY OF REQUIREMENTS In Thousands of Dollars)**

Appropriation Procurement of Weapons and Tracked Combat Vehicles, Army	FY1997		FY1997 Financing Per FY1999 Budget Estimate	Increase or (Decrease)
	Financing Per FY1998 Budget Estimate	Financing Per FY1999 Budget Estimate		
Program Requirements (Total)	1,603,055	1,553,655	49,400	
Program Requirements (Service Account)	1,468,455	1,419,055	(49,400)	
Program Requirements (Reimbursable)	134,600	134,600	0	
Less:				
Anticipated Reimbursements	(134,600)	(134,600)	0	
<b>BUDGET AUTHORITY</b>				
Appropriation	1,468,455	1,419,055		